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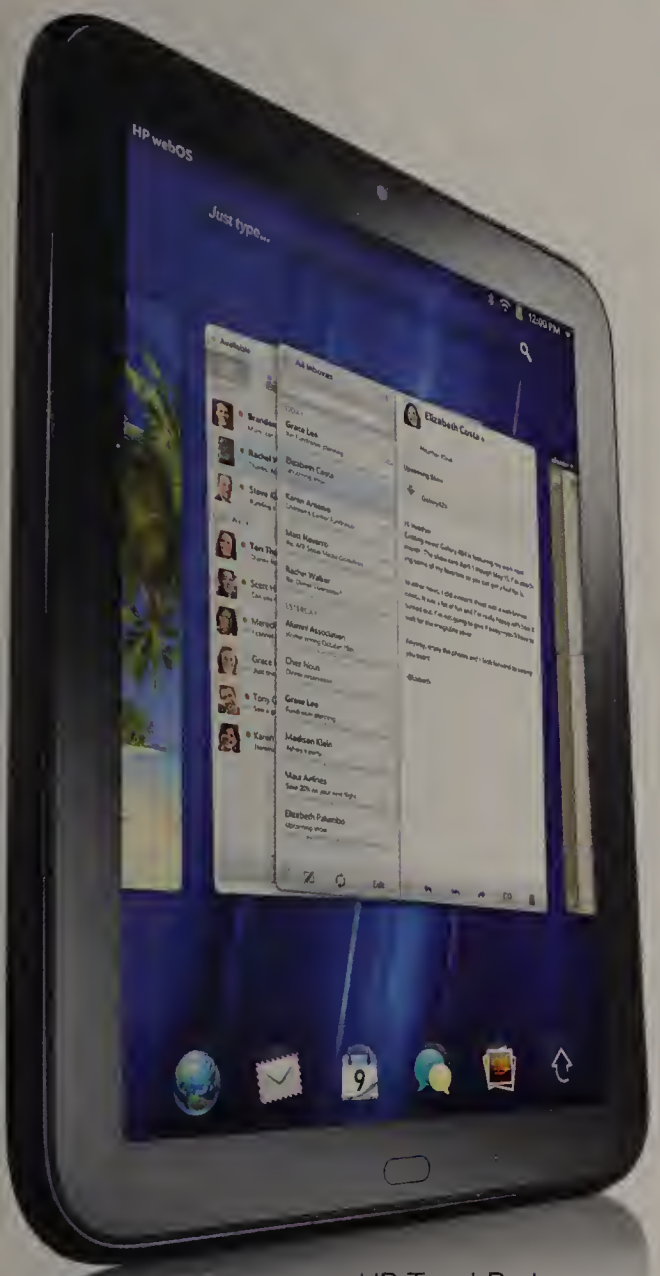

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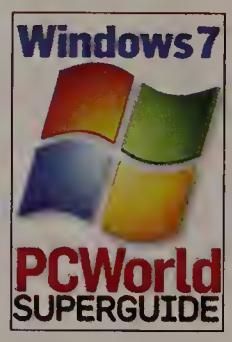

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STEVE FOX

When We Think About Ink

JOURNALISTS ARE COMMONLY, if not always charitably, referred to as "ink-stained wretches." Contributing editor Jeff Bertolucci has taken the sobriquet to heart, embracing ink stains in ways that few tech writers would dare.

As *PCWorld*'s "serial refiller," Bertolucci is on a mission to evaluate an array of lower-cost alternatives to standard inkjet cartridges, recounting his sometimes messy experiences for readers along the way (see "Printer Ink Refills Can Save You Money," page 38). Over the course of several months, he has refilled old ink cartridges by syringe, taken cartridges to Costco for refilling, and purchased refurbished and off-brand ink cartridges. In the process, he has documented the proceedings in words and photographs.

> Our "serial refiller" wanted to see if he could save cash on printer ink. He did, and got his hands dirty in the process.

Bertolucci, who has been affiliated with *PCWorld* since the early 90's, when he was an editor here, has written extensively about print consumables, most notably in 2008's "How Much Ink Is Left in That Dead Cartridge?" (find.pcworld.com/62166). Despite his interest in the topic, Bertolucci didn't come up with the idea for the serial refilling gig. That distinction goes to *PCWorld* senior editor Melissa Riofrio, our in-house printer expert, who was inspired by a friend who has been refilling the same ink cartridges for the past eight years. "My friend, who is very frugal, bristled at being called a cheapskate," she says, "though I said it as a compliment."

Caveat Empty

One of the biggest challenges of the entire project proved to be ignoring, or at least, downplaying the dire warnings that printers display when you try to insert third-party ink. "Using a refilled cartridge does not void the warranty," says Riofrio. Yet some of the error messages you'll see are downright frightening. "If you're not sure about what you're doing, these messages will scare you away."

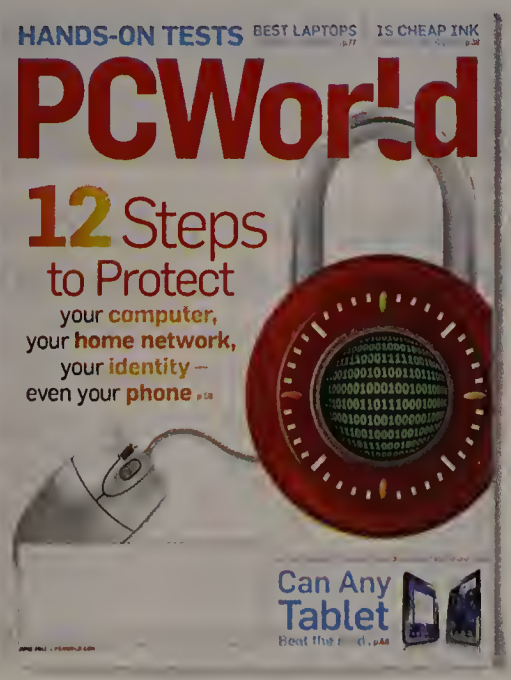
Bertolucci, for his part, doesn't scare easily. But he does have a few warnings for anyone who might be tempted to follow his lead. "This is messy work," he says, from experience. "Don't do it on the living room carpet or anyplace where, if a spill occurs, you'll regret it later."

Unless, of course, you too want to become an ink-stained wretch.

Steve Fox is editorial director of PCWorld.

A Tale of Two Covers

No, you're not seeing double: The June 2011 issue of *PCWorld* has two different covers—one for subscribers and one for newsstand buyers. The subscriber copy features our 12-step guide to security (page 58), while the newsstand copy touts our tablet smackdown (page 68). The stories inside the magazine, however, are the same for both groups; the only thing that's different is the cover. Why double up on covers? Chalk it up to experimentation. We wanted to have a bit of fun, and the newsstand cover—a departure from our typical approach—gave us that opportunity. So if you're a subscriber and you see "Can Any Tablet Beat the iPad?" on your magazine rack, don't worry. You haven't missed an issue.



PCWORLD TIMES TWO: Tablets (left) for the newsstand; security tips for subscribers.

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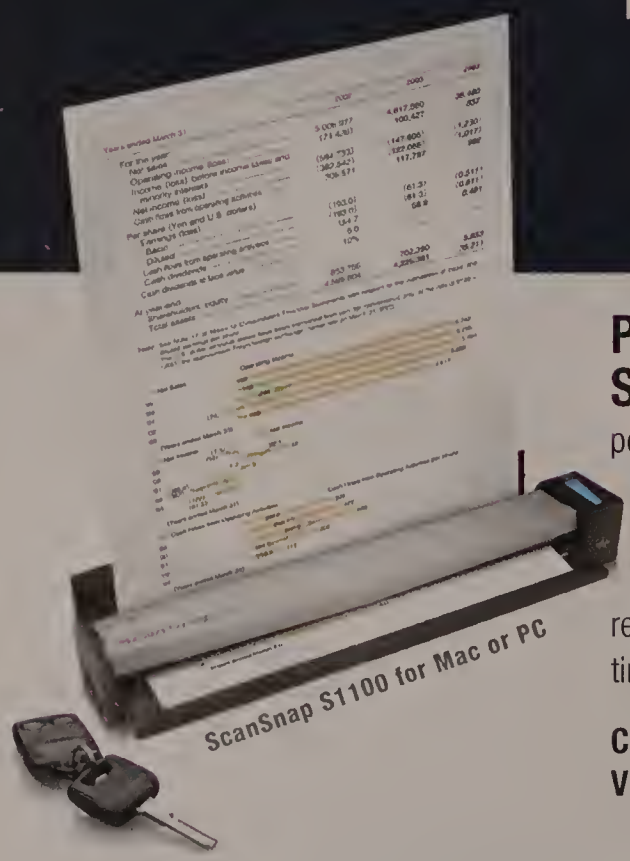

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PCW Forum

April's *Techlog* editorial on how an IBM computer beat humans at *Jeopardy* provoked some interesting responses. One reader implies that computer stupidity can be easier to deal with than the human kind; another wonders whether computers are now really starting to think. Hello, HAL?

Robots vs. Humans

Steve Fox's editorial ("Watson Wins! Is Humankind Toast?" *Techlog*, April) tells about a letter from his bank claiming a $0.01 debt. "Only a computer would be dumb enough to generate a letter and send it off at some expense via the U.S. mail, demanding a penny," he writes.

My wife and I recently moved from upstate New York to Texas, closing a bank account the day the bank credited our account with interest. For the next six months, it sent us statements saying our account had a $0.01 balance. I phoned the bank every month to get the $0.01 removed, but each time I was told to send them a sworn affidavit about our move. I finally got a vice president on the phone who took care of it.

Six adult customer service reps, a bank teller, a branch manager, and a secretary could not fix this. The bank paid the going rate for postage for a statement on a $0.01 deposit that the bank made in error. I'd rather have dealt with a computer.

Bill Koonz, Plano, Texas

Unfortunately, Fox commits a very common error, saying that "Watson was still not truly thinking" without defining what he means by "thinking."

Yes, it took IBM several years and a zillion dollars to accomplish building Watson. And yes, some of Watson's mistakes were silly. But what constitutes "thinking"? Does the ability to receive instructions and questions and produce intelligible responses—quickly—count? What about the ability to reconcile ambiguous terms and phrases against idiomatic English? What about being able to decipher puns? Or the demonstrated knowledge of the many categories of questions, or even the human concept of "categories"?

> Perhaps the effort would have been better spent training [Watson] to solve problems in its own realm.... Let the computer crunch the data that we humans can't handle.
>
> *automan, PCWorld.com forums*

Here's a question for Fox: Is Watson self-aware, and does it matter?

David Sigetich, Toronto

Mobile Security

The article "Mobile Devices Pose New Security Hazards" [*Security Alert*, April] repeats the conventional wisdom that passwords should be changed often.

In fact, many security experts question this recommendation, since forcing users to change passwords regularly leads to worse mistakes such as using weak passwords or writing them down to remember them. By the laws of probability, the chances of a hacker discovering a password is the same over time as discovering any other equally strong password no matter how long the user keeps it. As an analogy, your chances of winning the lottery do not improve or worsen whether you use the same number or a different one every time you play.

The recommendation does require that the user have a different password for each Website or other log-on that requires a password. And that underscores the wisdom of the advice to use a powerful and convenient password utility. That is, having the same password for two or more sites increases the likelihood that the password will be cracked.

Eric Kemmler

Farmington, Connecticut

Speedup Omission?

April's "Speed Up Your PC" had a glaring oversight: no reference to the operating system used. I assume that the one-year-old PC was running Windows 7, but the three-year-old system could have been running Vista or even Windows »

ILLUSTRATION: GARY NEILL

XP. More important, I saw no mention of running a 64-bit operating system, which you must have been if you installed 8GB of RAM and expected an improvement.

All the geeks may be running a 64-bit OS, but I suspect that half the consumer systems out there, including mine, are running a 32-bit OS. I wonder how many people running a 32-bit system are going to waste their money by upgrading their RAM to 8GB based on this article.

Jim Falls, Birmingham, Alabama

Editor's response: We did run a 64-bit operating system, but our article also notes that adding RAM by itself does little to improve overall PC performance.

—Patrick Miller

Classic Pick

In your April *Staff Picks* page (*Forward*), you feature a vertical LP turntable that can play at 33 or 44 rpm. Some old 45-rpm records would sound a bit slow!

As an old "vinyl hand," I'm curious how the arm stays parallel to the grooves and tracks them—and how long a record could last playing on this turntable. (And you wouldn't get hi-fi sound.) Some things are better left uninvented.

Eric Kisch, Shaker Heights, Ohio

Editor's response: The Ion Audio turntable in fact plays at 33.3 or 45 rpm.

PCWorld welcomes your feedbock. We reserve the right to edit for length ond clority.

Shore your thoughts in the Comments oreo under each story on our Website, or visit our Forums (find.pcworld.com/55165). Send e-moil to letters@pcworld.com.

CORRECTIONS

IN MAY'S "EVERYTHING for Nothing: Best Free Stuff for Your PC," we should have said that LaCie's Wuala cloud backup service offers 1GB of free storage.

In May's "Head-to-Head: Two Video Editing Apps" (*Reviews and Rankings*), Avid's product should have been listed as Pinnacle Studio HD Ultimate 15.

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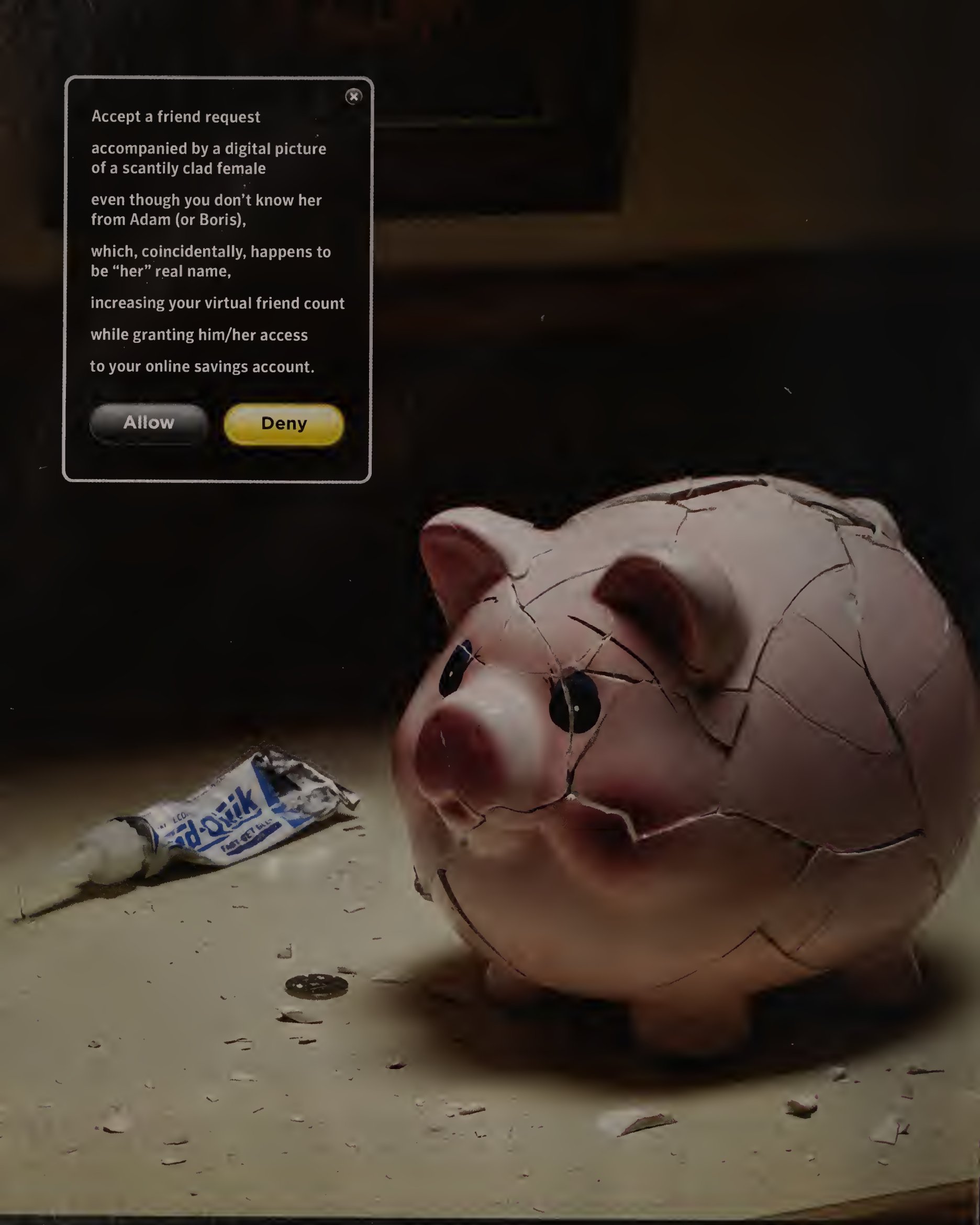

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Forward

The Battle Over 'Do Not Track'

BY DAVID DAW AND JARED NEWMAN

As advertisers try to track you around the Web, privacy advocates decry the trend, and browser makers introduce blocking tools.

HAS SOMETHING LIKE this happened to you? For weeks after you shop online for a watch, every Website you visit features ads for watches.

Behavior-based advertising, in which marketers track you online so as to pitch tailored ads, is at the center of a debate pitting advertisers against privacy advocates and legislators.

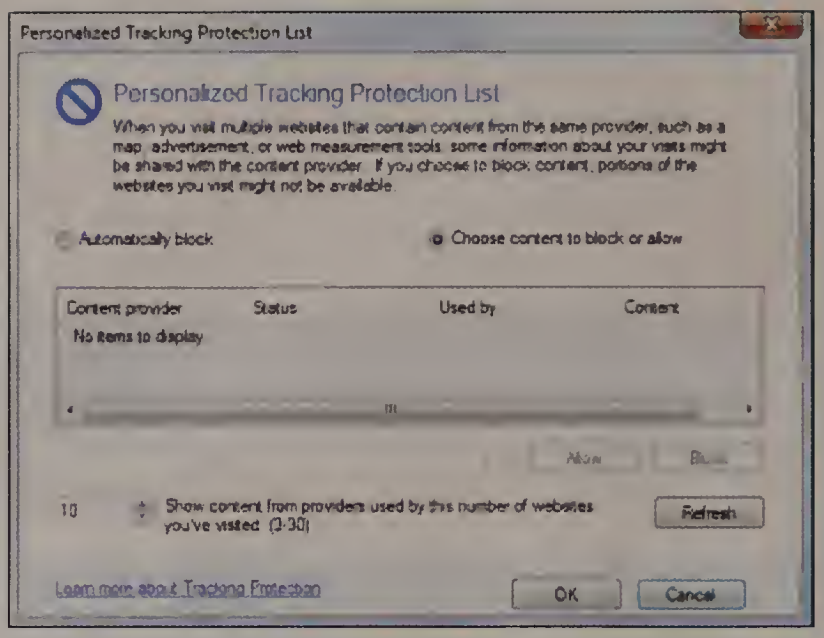
Leading browser makers are now stepping into the debate, too, providing do-not-track controls in the latest versions of Chrome, Firefox, and Internet Explorer. Apple's next Safari browser, in beta, will offer similar controls.

But these new tools are flawed. Though a browser can tell an advertiser not to track you, do-not-track controls depend on Websites to honor the requests. Because the controls rely on the voluntary participation of Websites, consumers have no surefire way to say "no" to tracking.

That could change, though. In April, Senators John Kerry (D-Massachusetts) and John McCain (R-Arizona) introduced a bill that would require all sites to let users opt out of sharing personal information. That follows a bill filed in February called the Do Not Track Me Online Act that would give Internet users the power to block online advertising networks and social media sites from sharing their personal data with other businesses.

Advertisers complain that do-not-track laws would hurt both businesses and consumers. Steve DelBianco, executive director of NetChoice, »

ILLUSTRATION: OTTO STEININGER



INTERNET EXPLORER 9 uses lists of trackers to block.

whose members include AOL, eBay, and Yahoo, says that do-not-track bills "strike right at the heart" of the revenue model of online publishers and advertisers. "The continued evolution of free online services is imperiled by state and federal legislators tripping over themselves to jump on the privacy bandwagon," DelBianco says.

Privacy activists argue that tracking consumers across the Web and building targeted ad profiles is potentially dangerous and could lead to virtual forms of redlining. In theory your Facebook or Twitter updates could be used by a credit agency, health-care provider, or future employer to determine if you are a good bet, privacy advocates argue. The Center for Digital Democracy's Jeffrey Chester notes that this type of advertising also fosters predatory ads—for dubious health cures, say.

Firefox's Do Not Track feature, available in the browser's Preferences menu, uses an *http:* header to tell Websites that the user doesn't want to be tracked. Web developers could then build the appropriate response into their sites—which would take time.

Internet Explorer 9's Tracking Protection requires the user to add lists of trackers to block, as provided by third parties. Like Do Not Track in Firefox, this feature relies on the good faith of advertisers, but it's more effective in the short term, as the lists don't require new code from sites.

In Google Chrome, users can install the Keep My Opt Outs extension, which retains privacy preferences even after users have cleared the browser's cookies. Users must still turn to third-party services, such as AboutAds.info, to opt out of ad personalization.

These browser mechanisms all have problems, claims Michelle de Mooy of Consumer Action. Laws that impose penalties for not honoring do-not-track requests, she argues, are the only effective way to protect consumers.

(IDG News Service's Grant Gross contributed to this story.)

TECH SPOTLIGHT: 3D DEVICES ON A BUDGET

SONY CYBER-SHOT DSC-WX9 For still 3D photos, the 16.2-megapixel Sony Cyber-shot DSC-WX9 ($220) has three 3D shooting modes: "Still 3D"; "Sweep Panorama," which lets you use one shot to take a 3D image to see on a 3D-enabled screen; and "3D Sweep Multi Angle," an illusion of 3D that you view on the camera's screen by tilting the device back and forth.

VIZIO 32-INCH CLASS THEATER 3D LCD HDTV Break into the HDTV third dimension without breaking the bank. If you're not dead set on a ginormous TV, this 32-inch, 1080p model (E3D320VX) will do fine. Internet-connected, the set is ready to entertain with preloaded apps, built-in Wi-Fi, and two pairs of Vizio passive-3D glasses. At $550, this HDTV is a steal.

SONY 3D BLOGGIE With a 3D HDTV, you need a way to shoot your own 3D videos. Enter the $250 Sony 3D Bloggie, a tiny, affordable camcorder with dual lenses and a glasses-free 3D display. Its 8GB of internal storage can hold up to 4 hours of HD video (in 2D mode), and it features a 4X digital zoom, 5-megapixel still capture, and a flip-out USB connector.

AMD RADEON HD 6870 GRAPHICS CARD As the 3D trend heads to PCs—with video, first-person shooter games, and images—you may be itching to update your rig with a 3D graphics card. AMD's Radeon HD 6870 is a budget-friendly midrange card with 3D support. Now going for around $210, it implements AMD HD3D technology, which also supports the Open Stereo 3D Initiative.

Windows 8—Hints of Things to Come

WHAT DOES MICROSOFT have up its sleeve for Windows 8? Details are scant, but cell phones, tablets, the cloud, and even gaming appear to be figuring strongly into Microsoft's thinking for its next operating system. The company seems to be mixing the best of many of its products and services into one streamlined computing experience called Windows 8.

Here are some things about Windows 8 I culled from the Web that hint at what we might see in the final release.

1 **The UI:** One small, but telling, change to Windows 8's user interface cribs a page from Windows Phone 7's playbook. Win 8's welcome/lock screen has the same interface as Microsoft's smartphone OS.

2 **The Office ribbon returns:** The context-aware Ribbon, which made a mess of Microsoft's Office suite, will replace the drop-down menus and toolbar in Windows 8's Explorer windows, making many more of Windows' hidden features visibly discoverable. And the Ribbon's big buttons simply beg to be touched—perfect for a touchscreen Windows 8 tablet.

3 **The cloud:** A closer look at the Explorer Ribbon shows two placeholder buttons, Sync and Web Sharing. Microsoft has been angling to push a lot of its services into the cloud, and that cloud functionality might be digging deeper into the core OS. The Sync button may work like Windows Live Mesh, which syncs program settings across PCs and enables offline connectivity.

Web Sharing may use Windows Live SkyDrive, a cloud storage and sharing feature that hands out 25GB for free, integrates with Office, and works just like Dropbox.

4 **Xbox integration:** The possibilities of Kinect plus Windows 8 are limitless, but we know that Microsoft plans on using proximity detection and facial recognition to start up and unlock PCs.

The company also apparently intends to meld the Xbox 360 and Xbox Live to the Internet as a whole, especially for social gaming. Such use of Kinect technology to interact with online buddies, play PC games, and perhaps do much more could be the future of platform integration.

5 **128 bits of power:** Windows 8 will employ 128-bit architecture, which would represent the next leap in computer performance.

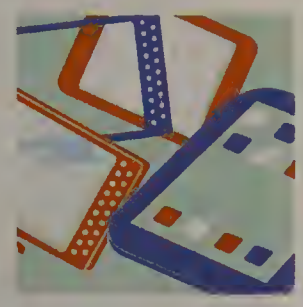
6 **Tablet hardware:** Ditching the x86 platform, Microsoft has confirmed that Windows 8 will operate on the ARM microchip architecture—the same tech that powers most of the world's smartphones and tablets. Conclusion: Microsoft has gotten serious about a tablet, and wants to power it with the forthcoming Windows 8.

—Brennon Slattery

ILLUSTRATIONS: OTTO STEININGER

BRIEFS

Live TV on Tablets?



Time Warner Cable recently added 19 TV channels to its iPad app offerings just a day after Discovery Networks, Fox Cable, and Viacom forced the cable company to pull their channels from its iPad app. New channels include A&E, Bravo, CNN, and ESPNnews. The moves underscore tensions as companies move into the digital era of making content available to customers on mobile devices such as tablets and smartphones. Companies such as TWC are boldly testing the limits of broadcasting, and offering consumers choices they've never had before.

Amazon Launches Phone Music Streaming

Amazon's new Cloud Drive online storage service lets customers keep music in the cloud and, in the United States, stream it to an Android app or through a Web browser. Cloud Drive offers 5GB of free storage for documents, photos, videos and music, with more storage available for a fee. U.S. users can stream the stored music and play it on PCs, Macs, and Android smartphones and tablets.

Google + 1 = Social Overload?

Google's latest offering is its Google + 1 service, an add-on to search results that some have described as being similar to Facebook's "Like" button—only instead of posting your approval on a virtual wall, Google + 1 puts your recommendation into your friends' search results. The + 1 button will appear soon next to everything in Google-based searches.

Nook Color Gets Apps, Flash Support

The Barnes & Noble Nook Color e-reader's software update in April made it a cheap Android tablet. The device costs $249 from B&N, has a 7-inch color touchscreen, and runs on Google's Android mobile operating system. Until now it has lacked e-mail access, apps, a Web browser, and other tablet functions. The update brings the e-reader closer to being a full-featured Android tablet.

AMD's Llano Processor Is a Big Deal

AMD'S MOVE TO ultrathin 32-nanometer microprocessors may not sound too sexy, but it is if you like powerful laptops with long battery life.

In early April, AMD announced its first shipments of 32nm A-Series quad-core chips, code-named Llano, for laptops and desktops. AMD has now caught up with Intel on the 32nm manufacturing process front, giving it a more competitive foothold, especially in notebook processors.

Industry analysts consider AMD's Fusion chips, which are already found in $200 laptops and desktops, to have better graphics performance than Intel's chips—a major breakthrough for laptop users. The new processors also are more energy efficient, helping to preserve much-needed battery life on notebooks.

New Llano-powered laptops using the 32nm process are expected this quarter.

AMD's latest Fusion technology, including the A-Series Llano chips, coupled with an early recall of Intel's Sandy Bridge chips, has given AMD a great boost in its epic, long-running battle with Intel.

Finally getting to the 32nm manufacturing technology was essential for AMD, especially when the emphasis these days is not just on value but also on the utmost in mobility and performance.

—Melanie Pinola

GEEKTECH

Three Ways You Can Repurpose an Old PC

That old computer you have sitting in the closet can be repurposed, upgraded, or converted into a media server.

MOST OF US have an old computer of some sort that we keep out of sight somewhere. Here are a few ways to reuse a not necessarily obsolete PC.

Make it a master of one trade: Limit the old PC's use to one purpose. On my old laptop, I cleared out all the programs I didn't need. And I mean all the programs—nothing can run in the background. Now I use it only for two art applications, and only one at a time. This is a great method for keeping old software and an old computer in use.

Upgrade it: If your PC isn't too old, upgrading it is a healthy and viable option. Tinkering is also a great way to acquaint yourself with the guts of your machine, if you have a little time and cash. The Web has many places for buying parts and learning how to put them together.

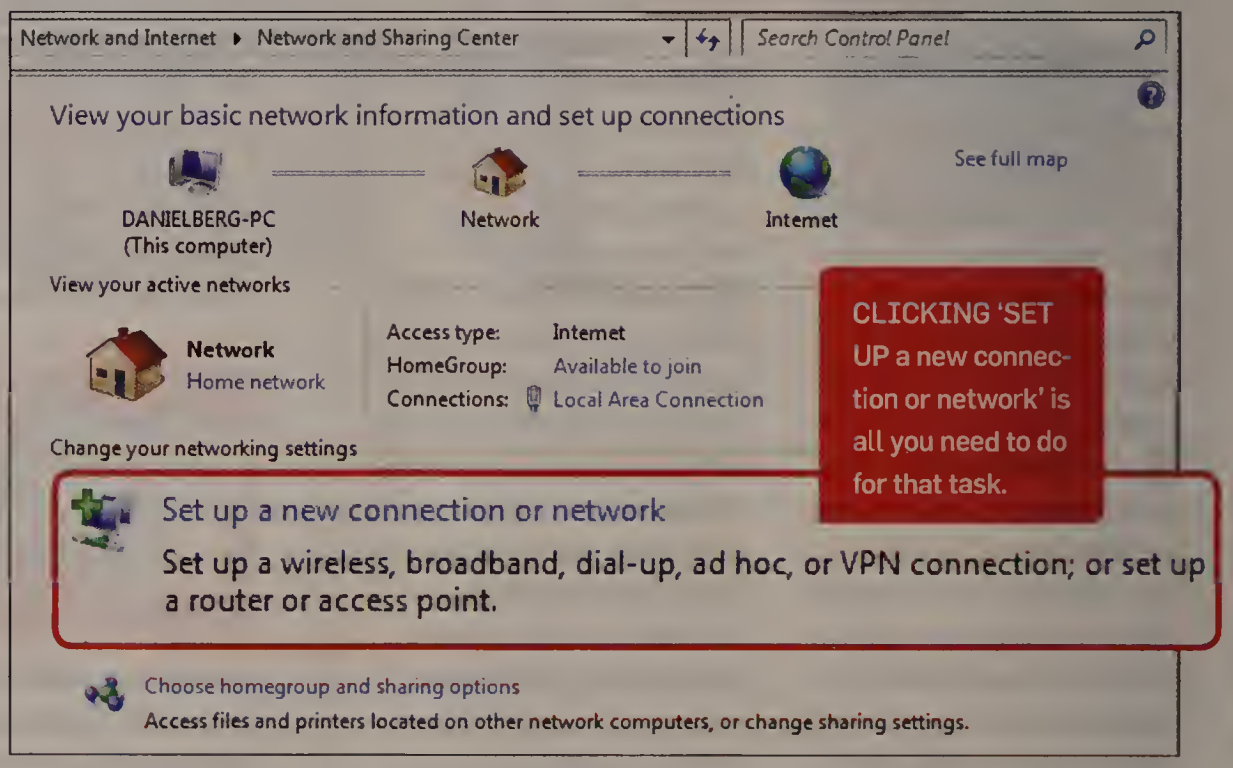
Turn it into a media server: You have to clear your computer of any unnecessary data and download the most recent service pack for your OS before you start. You also need:

- **A high-speed Internet connection, including a network card**
- **Hard-drive space for your media files**
- **A router**

Once your components are installed and your router is plugged in, set everything up. Click *Start*, select *Control Panel*, and then choose *Network and Internet Connections*. From there, select *Network Connections* and click *Network and Sharing Center*, under which you should see a list of potential actions. If you don't have a network, click *Set up a new connection or network*. If you do, your computer should be connected. If you have just set up the connection, reboot your computer to make it take effect.

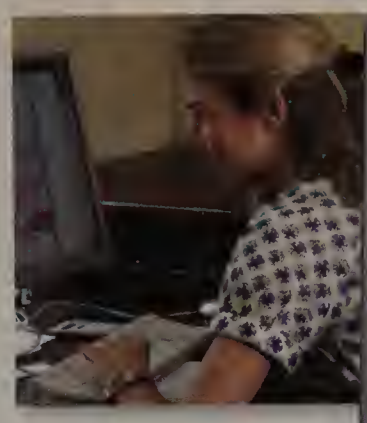
You need to rename the server. Right-click *My Computer* and then select *Properties*. You can rename your computer through the 'Change setting' option under 'Computer Name, domain, and workgroup settings'. Now you can access the server from any network PC.

—Dan Berg



›› Visit the GeekTech blog at go.pcworld.com/geektech for hacks, tips, and hardware news.

What's at risk if bad power damages your home network?



All of the above.

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Our Back-UPS units protect your home office, digital living and home media applications, notebook computers, DVRs, and gaming application. And since we now offer energy-efficient models that reduce electricity costs through unique power-saving outlets, you can realize true energy savings regardless of the applications you're backing up. Throughout your home, the APC Back-UPS is the cost-saving insurance you need to stay up and running and reliably safeguarded from both unpredictable power and wasteful energy drains.

Keep your electronics up and your energy use down!

ES Series

The ever-popular ES models are priced affordably yet provide enough extended runtime to allow you to work through short and medium power outages. Some power-saving models have been designed to actively reduce energy costs.

The energy-efficient ES 750G

The ES 750G boasts innovative power-saving outlets, which automatically shut off power to unused devices when your electronics are turned off or asleep, eliminating wasteful electricity drains.

- 10 outlets
- 450 watts / 750 VA
- 70 minutes maximum runtime
- Telephone/network protection

The best-value ES 550G

The ES 550G uses an ultra-efficient design that consumes less power during normal operation than any other battery backup in its class, saving you money on your electricity bill.

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- Telephone/network protection

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Staff Picks

NEW PRODUCTS THAT HAVE OUR EDITORS DROOLING

HP TouchSmart 610

Touchscreens on PCs are great in theory, but doing a lot of poking and prodding on a vertical screen gets tiresome. The TouchSmart 610 (starting at $900) reclines, so you end up with a 23-inch faux tablet that's easier to work on.
find.pcworld.com/71766

Canon EOS Rebel T3i

Canon's newest DSLR ($950 with lens) produces some of the best images we've seen in our lab tests. The secret is in the high-quality kit lens. find.pcworld.com/71763

Sony HDR-TD10

Most 3D camcorders take two relatively low-quality images and smoosh them together to form the 3D image. The HDR-TD10 ($1499) takes two full 1080p images. The results are stunning. find.pcworld.com/71764

MSI X-Slim X-370

Every laptop maker wants to take a shot at the MacBook Air. MSI's X-Slim X-370 (price to be announced) has an AMD Fusion processor that's powerful but energy-efficient. find.pcworld.com/71765

THE UNDISPUTED LEADER IN SSD TECHNOLOGY. AGAIN.

"There's simply no dethroning the Vertex 3"
- Anandtech

"OCZ is leading the way yet again, setting the bar for SSD performance in 2011.
- Legit Review

The OCZ Vertex 3 spanks the competition with up to 69% faster speeds in real-world conditions and has firmly established itself as the fastest SATA SSD we've seen."
- Storage Review

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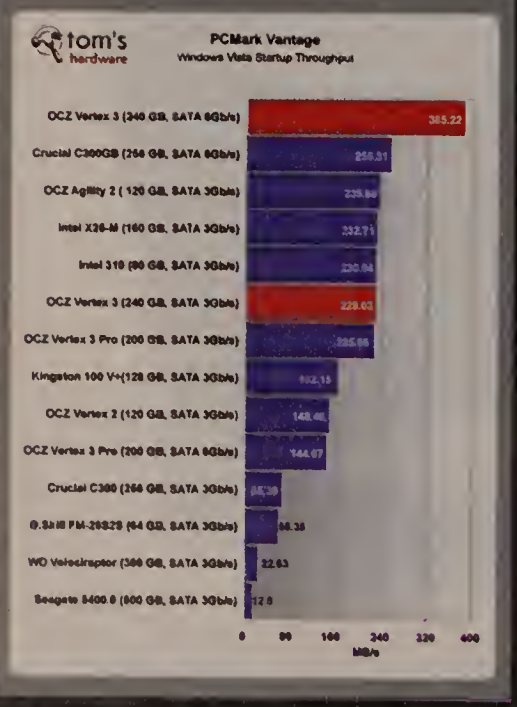
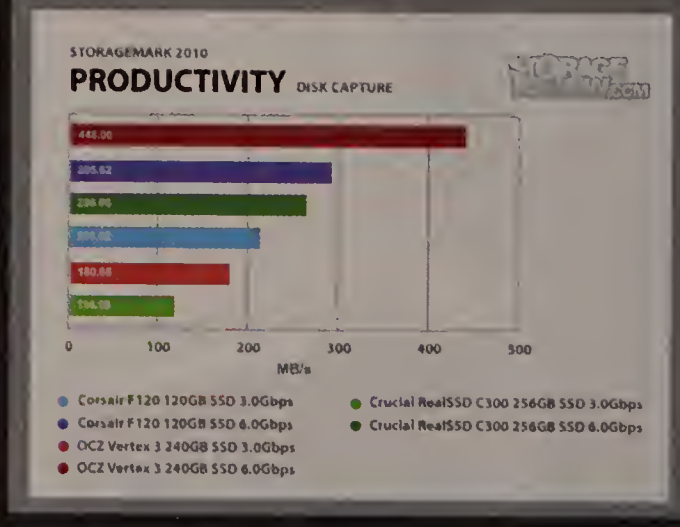
NOT ONLY DO WE SET THE BAR, WE STAY ON TOP OF IT.

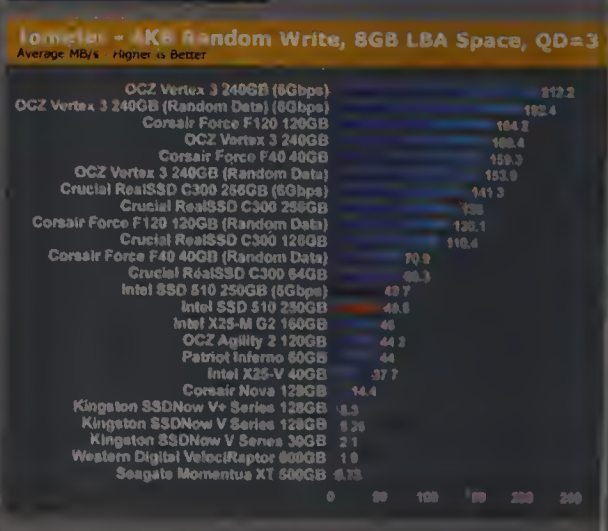
TOM'S HARDWARE



STORAGE REVIEW



ANANDTECH



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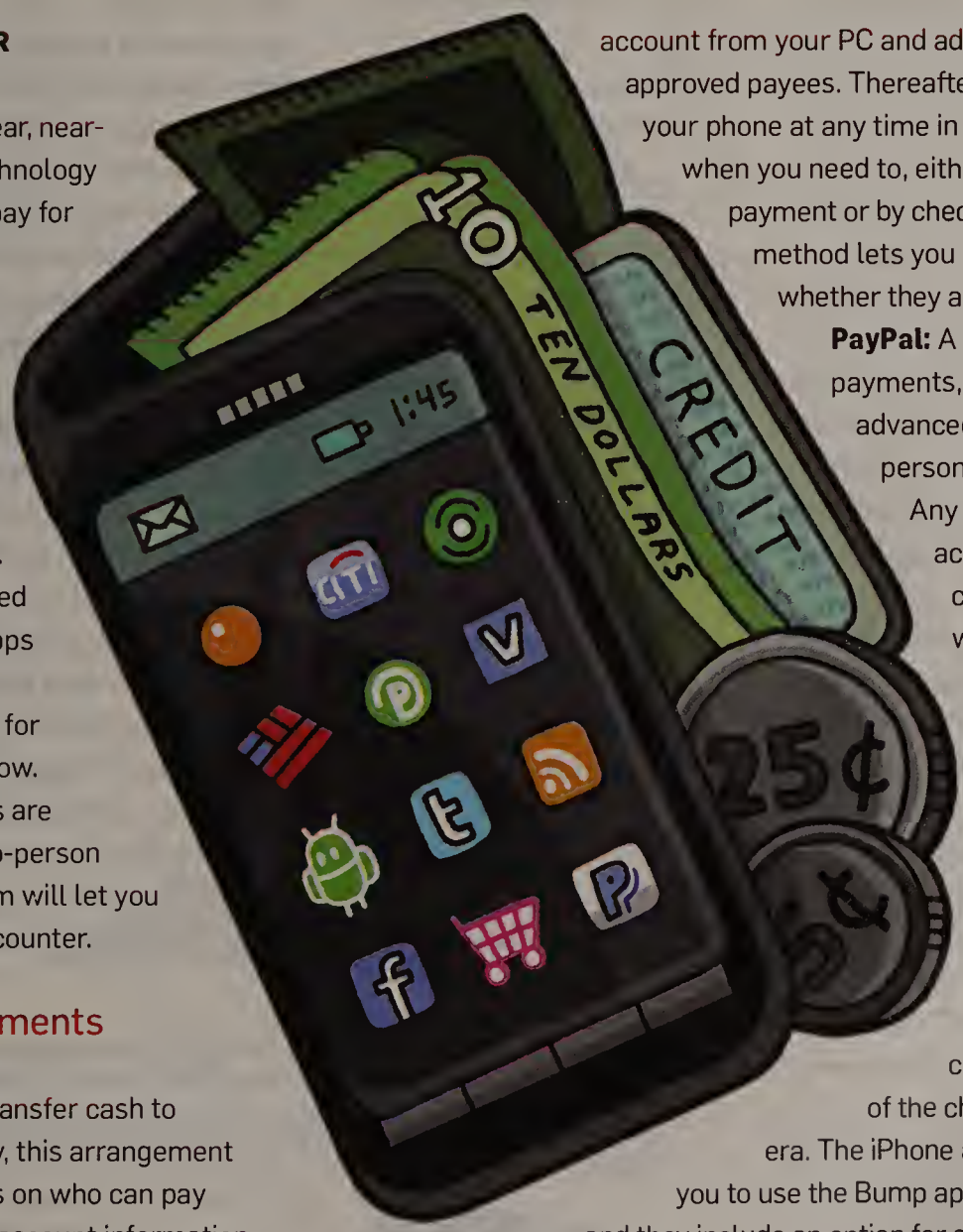
Six Easy Ways to Pay by Smartphone

These awesome apps let you use your phone for transactions today, without NFC technology.

BY ROBERT STROHMEYER



SOMETIME IN THE coming year, near-field communication (NFC) technology will enable early adopters to pay for things simply by holding their phone up to a retail checkstand. Of course, that convenience will be a long time coming for most consumers, even if they rush out and purchase one of the first NFC-capable phones to arrive.

But take heart: We've rounded up half a dozen cool mobile apps that will enable you to pay for items (or to receive payments for them) with your phone right now.

Most of these payment apps are designed strictly for person-to-person transactions, but a few of them will let you make purchases at the retail counter.

Person-to-Person Payments and Recurring Bills

Plenty of apps can help you transfer cash to another person. Unfortunately, this arrangement imposes numerous limitations on who can pay whom, and it exposes private account information.

Major banking apps: Large banks such as Bank of America, Citibank, and Wells Fargo have created Android and iPhone apps that let you pay (or get paid by) anyone who has an account at the same bank. Transferring money between customers requires the payee to share account numbers with the payer, however, so it isn't an ideal way to handle most transactions.

Then again, if the payee is a company or person with whom you frequently do business, you can probably log on to your account from your PC and add the recipient to a list of approved payees. Thereafter, you can log on from your phone at any time in order to send a payment when you need to, either by instant electronic payment or by check. And best of all, this method lets you pay folks regardless of whether they are customers at your bank.

PayPal: A familiar name in online payments, PayPal offers the most-advanced options for person-to-person smartphone payments. Any two people with PayPal accounts can send and receive personal payments without incurring transaction fees, as long as the payments are made from a linked checking account (rather than from a credit card).

PayPal Mobile runs on Android, BlackBerry, and iPhone. The iPhone version lets users cash checks by taking a picture of the check with the phone's camera. The iPhone and Android versions allow you to use the Bump app to exchange contact info, and they include an option for splitting a dinner bill easily; the BlackBerry version has yet to catch up on either score.

Venmo: Available (in limited release, with a sign-up waiting list) for iPhone and Android, Venmo offers PayPal-esque features for paying friends, splitting restaurant checks, paying your utilities, and so on. The service lets friends send and receive payments with no transaction fees or signup charges. It also permits you to link your Twitter and Facebook accounts to let everyone on your friends list know the identity of the lucky recipient of your »

ILLUSTRATION: SERGE SEIDLITZ

largesse—an odd example of information sharing in this post-privacy era.

PayBack: A little app called PayBack for iPhone lets you handle shared expenses between friends (or roommates) by tracking who spent how much for what. You can quickly set up a report tabulating who owes whom how much, and then send the report via e-mail. Essentially, it amounts to an IOU (or a "UOMe").

Mobile Shopping Spree

A couple of apps offer you a glimpse of the future, in which you'll be able to make retail purchases with your smartphone.

Starbucks Card Mobile for iPhone: If someone gave you a Starbucks gift card, but you never have it in your wallet, you need the free Starbucks Card Mobile iPhone app. To use the app, first register your gift card at Starbucks.com. Then enter the card number into the app, and authorize it with your username and password from Starbucks.com; at that point, a picture of your card will appear in the app along with your current balance. You can enter as many cards as you like.

At your local Starbucks, launch the app, tap the glowing *Touch to Pay* button to reveal your unique barcode, and hold the phone up to the cash register's scanner until you hear a beep. When you're done, the app will display your new balance.

Parkmobile: Never have enough coins for a parking meter? If you've parked in a Parkmobile spot, you can pay with your BlackBerry, iPhone, or Android device. Once you've signed up for a Parkmobile account, you just pull into a space, launch the app, and let your phone's geolocation features pinpoint your car. Submit your payment, go about your business, and let Parkmobile alert you when 15 minutes are left on the meter. (Whether you can re-up for additional hours depends on what kind of parking space you're in.)

In the big picture, we're waiting impatiently for NFC payments to go mainstream. But with these apps, we can enjoy some benefits of NFC now.

SKEPTICAL SHOPPER

Know Who Your Online Seller Really Is

ANNE B. McDONALD

Websites like Amazon and Sears have many sellers. And some of their return and refund policies may not suit you.

DO YOU KNOW who you're buying from when you are on one of the Internet's large shopping sites?

Vast marketplace sites like Amazon.com, Buy.com, and Sears.com let you view millions of products—and their prices—in one place. And at Sears.com you often have the choice of picking up the merchandise in person at a Sears or Kmart store through the company's MyGoFer service. (For details, see pcworld.com/71761.) To avoid hassles, though, keep these tips in mind.

Know your seller: Amazon and Sears have millions of products on their sites, so the seller of the item you choose may very well not be Amazon or Sears.

Understand how the company and the reseller deal with problems: On its Website, Amazon states that "The condition of the item you buy and its timely delivery are guaranteed under the Amazon A-to-Z Guarantee." (Read the entire Amazon guarantee policy at find.pcworld.com/71757.)

Be aware that different sites handle their marketplace sellers differently: For instance, Buy.com instructs you to contact the seller directly regarding a return or any problem with an order purchased from its marketplace sellers, and says that the products need to be returned directly to the seller, not to Buy.com in the event of a problem. Buy.com's cobranded sites, such as its Wireless Store, have their own return policies. Sears.com maintains a team of customer service reps to help resolve customers' issues and to connect them directly with individual sellers, as needed. The Sears.com Returns page states, however, that items not sold by Sears or Kmart cannot be returned or exchanged at the buyer's local Sears or Kmart. Each merchant on Sears.com has its own return policy.

Be extra careful when buying HDTVs: Most sellers have adopted significantly more-stringent policies governing returns and/or refunds (and return shipping costs) for large TVs than they have for smaller or less fragile products.

LISTINGS ON AMAZON.COM specify the seller and shipper of items offered for sale.

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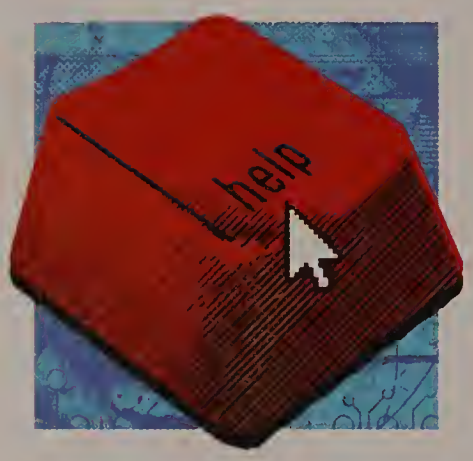
ON YOUR SIDE

MY FATHER PASSED away recently, and his Sprint phone was under contract on my account. Sprint promised not to charge me an Early Termination Fee for canceling his line if I sent the company a copy of his obituary. But when I did so, I also notified Sprint that my mom wanted to keep my father's phone number for sentimental reasons. I then ported the number to her Verizon plan. But Sprint subsequently charged me the $180 fee because I had ported the number. Can you help?

—Richard Ruggieri, Providence, Rhode Island

LEAH YAMSHON

OYS responds: When we contacted Sprint about Ruggieri's issue, a Sprint public relations representative explained that the company's policy is to waive the cancellation fee if someone dies, but that carriers (including Sprint) typically don't waive them when somebody ports a phone number to another carrier. The rep said that the company would not have charged a fee if the account had remained active on Sprint until the contract's termination. Once a contract ends, the user can port the number to another carrier—or simply cancel the account—without incurring a fee. After hearing Ruggieri's plea, a Sprint Customer Care Team member decided to reimburse him for the $180 fee, citing the sensitive nature of this particular case.



This misunderstanding resulted from confusion about what the company's policy was and what might trigger an exception to it. When a Sprint representative originally promised Ruggieri a waived fee, that person was under the impression that the family would either be canceling the account or porting the number to a different Sprint account. We recommend that you read up on company policy before initiating contact with a vendor or carrier, and clarify each detail of your case to avoid miscommunication and crossed wires.

Wrong OS on Refurbished Phones

Dave Sanda of Fountain Inn, South Carolina, bought two refurbished Archos 7 501521 Internet Home Tablets from TigerDirect. The devices were advertised as running Android 2.1 OS, but they arrived with Android OS 1.5 installed and would not update to version 2.1. When Sanda contacted TigerDirect's help team to ask about returning the tablets, a company rep told him that it would charge a 15 to 20 percent restocking fee, and that he must pay for shipping. After we spoke with TigerDirect, the company agreed to waive the applicable restocking and shipping fees if Sanda returned the tablets with their original components and boxes.

›› Have you run into a problem involving customer service, a warranty, a rebate, or the like for your tech gear? E-mail us at onyourside@pcworld.com.

Adobe Offers Creative Suite Rental Plan

ADOBE HAS ANNOUNCED that it will make Photoshop and other flagship products from the company's Creative Suite 5.5 available to businesses and individual consumers on a subscription basis. Is this new arrangement a good deal?

At $35 per month (the rate for a one-year subscription plan), it would take you 20 months to pay for the full $700 price of Photoshop (as sold individually). The advantage of renting, according to Adobe, is that you will always have the latest version of the software to work with.

The new software comes in several packages, designed for different jobs, such as layout, Web design, and video and audio production. The subscription plan will enable users to rent individual programs or software packs consisting of several programs from Creative Suite 5.5 on a monthly or annual basis.

Creative Suite 5.5 is a midcycle update of Adobe's multipurpose software collection, with substantial upgrades to several of its most widely used products, including After Effects, Dreamweaver, Flash Professional, InDesign, Photoshop, and Premiere Pro. Adobe's various Creative Suite 5.5 editions are pricey—$2600 for Master Collection, $1900 for Design Premium, $1800 for Web Premium, $1700 for Production Premium, and $1300 for Design Standard (with upgrade pricing and volume licensing available)—so renting them is well worth considering.

We think that renting all or part of the suite makes sense for small businesses dealing with brief, graphics-intensive projects. Consumers and casual users, on the other hand, may be better served by Adobe Photoshop Elements ($80), which is less complex but can easily handle occasional editing and retouching jobs.

—Daniel Ionescu

ILLUSTRATION: GARY NEILL

In search of a new style
MONEUAL 320

Raising the HTPC Standard

Composed entirely of aluminum, the **MONEUAL 320 HTPC** pu's to use a single HDMI cable that outputs both multimedia and audio in digital high quality onto an LCD TV. The Moneual 320 is perfect not only for basic PC functions such as word processing and web surfing, but also for storage, recording, and playback of full HD quality media. Delivering powerful performance at the size of the average DVD player, the Moneual 320 will be the key to bringing the HTPC out of the niche and into the mass market.

MONEUAL 312

MONEUAL 320

MONEUAL 972i

Moneual recommends
Windows 7

MONEUAL

amazon.com newegg

For more information or to purchase one of our award-winning products, call 1-877-450-0105 or visit www.moneual.com

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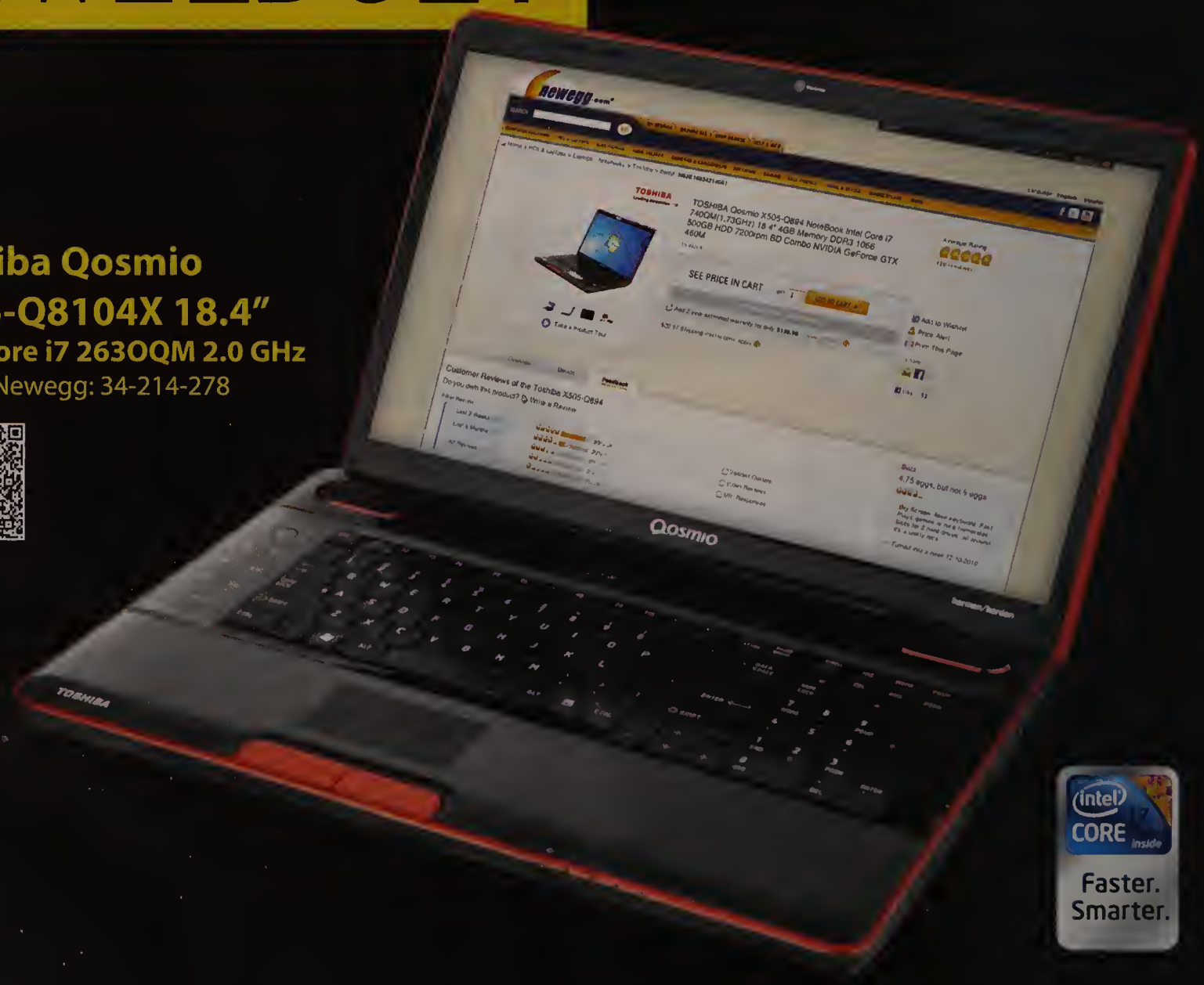
KNOWLEDGE IS POWER. EVEN IF IT'S SOMEONE ELSE'S KNOWLEDGE.



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Mine Customer Data Properly

Data mining can help unearth information about what customers want, but you need to avoid committing privacy violations. Here are simple methods to build a loyal following.

BY ROBERT VAMOSI

TO RUN A successful business, you have to know what interests your customers—but you must also protect their privacy. Here's how to walk that line when mining data from the Web. (For more, see the online version of this article at find.pcworld.com/71756.)

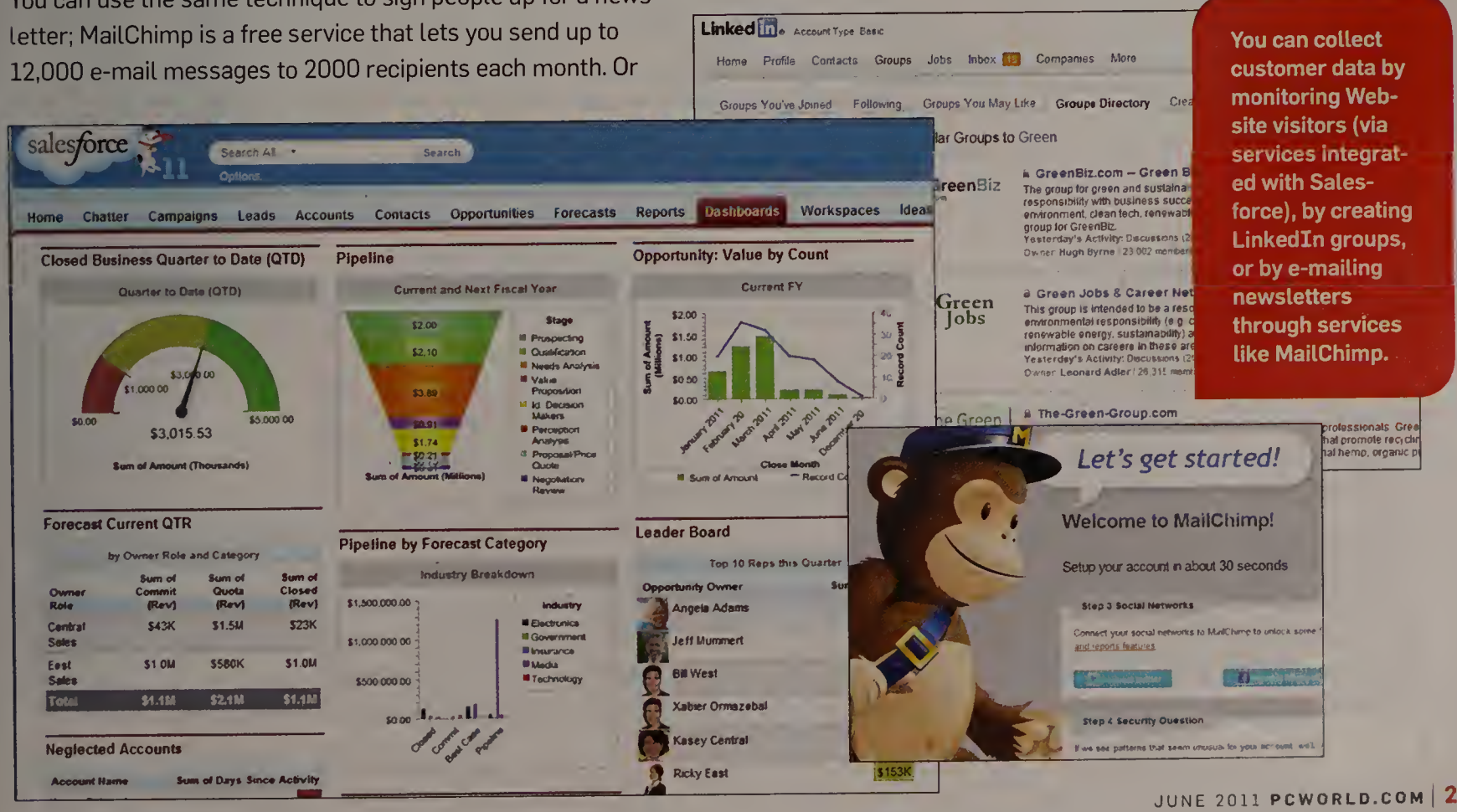
Generate Lists and Capture Traffic

You have several ways to generate customer lists. One method is to write a white paper, post it on your site, and then legitimately collect contact information from anyone who wishes to download the paper for free. As long as you ask for the minimum (name, e-mail address, phone number), most visitors will oblige. You can use the same technique to sign people up for a newsletter; MailChimp is a free service that lets you send up to 12,000 e-mail messages to 2000 recipients each month. Or you can post a survey on your site that collects respondents' contact details, using an online service such as SurveyMonkey.

Another method is to use social networks within their terms of service. For instance, you can promote your company with a Facebook fan page. Using names, you can search for contacts and ask that they join the fan page; by sending friend requests, you give recipients the option of following the site or not. On LinkedIn, you can create targeted, niche groups around your company's interests to generate leads. But both this tactic and creating a business Twitter account require a steady stream of new content.

You can monitor who visits your Website, too. Services such as Pardot capture site visitors, integrating the results into Salesforce CRM. Likewise, Etrigue integrates with Salesforce.com, as well as with Salesforce's AppExchange or Microsoft Dynamics CRM.

Warning: Don't scrape. It might seem easy to obtain e-mail addresses from members of a social network, but this action violates the terms of service for most networks. You can't copy someone's information without their permission. What about »



You can collect customer data by monitoring Website visitors (via services integrated with Salesforce), by creating LinkedIn groups, or by e-mailing newsletters through services like MailChimp.

copying the contacts from a rival or former company? That action is impermissible, too, although the legal details are still being worked out in the courts.

Also, not every social network is the same. Facebook grants members only noncommercial rights, but LinkedIn is designed for professionals to use in building up contacts, so using its information for commercial purposes may be all right.

If you have a mailing-list program, you can use it to find out which social media your clients use. The program SocialPro employs MailChimp mailing lists to return raw numbers of contacts using Facebook, LinkedIn, and Twitter, among others.

Apps: Beware of the Risks

Last fall Facebook disclosed that developers may have leaked personal information about its users; apps such as FarmVille and Texas Hold'em allegedly sent Facebook ID numbers to at least 25 advertising and data firms. A class-action lawsuit has been filed against Facebook, but that didn't stop Facebook from making a controversial move in February to formally allow third-party apps to access users' information. Facebook backtracked in the face of public pressure, but seems certain to proceed with the plan in 2011.

Make sure that your app developers follow a secure software development lifecycle, such as the open Building Security In Maturity Model (BSIMM). By securing your app code at the beginning, you can avoid the embarrassment of seeing your program singled out by security vendors as having "privacy issues."

Follow the Rules

Whatever method you use to build customer lists, abide by these simple rules.

- Always be clear to the customer as to what information you're requesting.
- Ask for the bare minimum of data.
- Clearly state opt-out choices. Include opt-out instructions in each newsletter.
- In your privacy policy, explicitly state how your company uses collected data.

NET WORK

Pick the Right Mobile Tool for the Job

TONY BRADLEY

Understand the strengths and weaknesses of your mobile device options.

IF YOU WERE GOING on a business trip and you could take only one gadget, what would it be? Each mobile device fills a role, and you have to select the tool that best meets your needs in a specific scenario. (For more, including a look at how an e-reader can be the right choice for the road, see the online version of this article at find.pcworld.com/71754.)

FEATURE PHONE: A plain old feature phone still has a fair amount of versatility. In addition to voice-call capabilities, you get text messaging, and many handsets can connect with e-mail platforms. Most have a camera. You can't truly surf the Web, and you don't have the benefit of apps, but through feature-phone tools and SMS, you can post updates on, and keep up with, social networks.

Role: A feature phone will do just fine if you mainly need to be accessible and to keep in touch, but you don't plan to use the device to be productive.

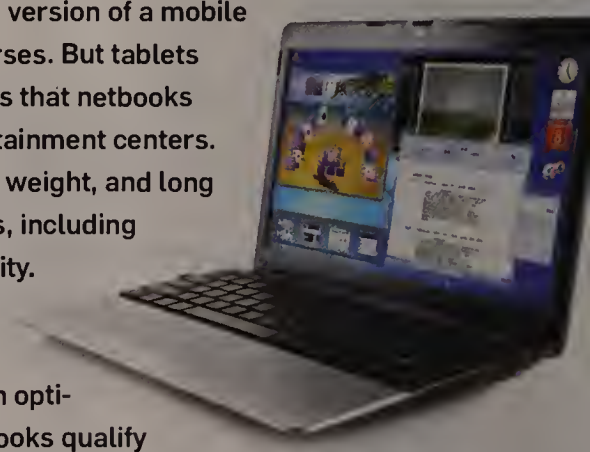
SMARTPHONE: Able to sync, carry vast amounts of data, and allow you to surf the Web, smartphones have access to a multitude of apps, including productivity tools. Such devices can also double as MP3 players and GPS units.

Role: A smartphone works when you don't think you'll need to crank out reports or spreadsheets, but you want to be able to do so if necessary. It's also the right choice if you want a single gadget that can handle phone calls and fill other roles.

TABLET: Since most tablets today run a version of a mobile OS, they may not be productivity workhorses. But tablets can perform virtually all of the basic tasks that netbooks and laptops can, while doubling as entertainment centers.

Role: A tablet—with its small size, light weight, and long battery life—is great for various purposes, including Web surfing, e-mail, and limited productivity.

NETBOOK: Offering less CPU horsepower, RAM, and storage capacity than a laptop, most netbooks also lack an optical drive. Armed with a desktop OS, netbooks qualify for fairly intensive productivity, and their usually strong battery life is a plus. But the small display and diminutive keyboard are handicaps.



NEED AN EASY-TO-CARRY mobile device that runs desktop software? Choose a netbook.

Role: Netbooks are good when you need a physical keyboard and the ability to run desktop programs, but you want something light with enough battery life to last the day without requiring recharging.

LAPTOP: When it comes to processors, memory, and data storage, laptops have the most horsepower of all mobile options. Lugging a laptop and its accessories (including a spare battery and a backup power adapter) can be a workout. The benefit, though, is that you sacrifice virtually nothing from the full PC experience.

Role: A laptop is the right choice for true portable productivity. For tasks that require a full desktop OS and a full physical keyboard, it gets the job done.

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Results based on third-party study. Motorola XOOM is upgradeable to 4G LTE in Spring 2011. LTE is a trademark of ETSI.

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TECH AUDIT

VoIP Migration Leads to Savings and Employee Mobility

ELSA WENZEL

BUSINESSES ARE TURNING away from PBX (private branch exchange) systems and toward Voice over Internet Protocol telephony, which lets conversations travel as data across the Internet. By 2013 more than 80 percent of businesses will use VoIP, according to research by In-Stat.

VoIP can be ideal if your company handles many calls among multiple people, has mobile employees, or runs satellite offices. It can help shrink or eliminate the cost of long-distance and conference calls. VoIP also allows you to manage calls as you would other data. For example, a caller's contact information may pop up on a Web-based dashboard or on a smartphone with a VoIP app when they ring your number. Depending on the service, voice calls can be translated into text that you read via e-mail or on a phone. Many services also offer instant messaging, virtual meetings, and videoconferencing. VoIP is key to integrating all your communications into a digital hub.

If you have a local- or wide-area network, you've laid a lot of the groundwork. Make sure your firm has a T1 line or better before trying to cram calls through a sluggish pipeline.

VoIP Options

Hosted VoIP leaves the heavy technology lifting to another company. It can help a small business appear bigger, providing call transfers and phone numbers for employees. It can include toll-free numbers and integration with e-mail and fax software, too. You buy or lease IP phones, and download software. 8x8 and Speakeasy are among the many hosted-VoIP companies; your ISP may also offer VoIP.

With on-site VoIP you'll have to handle all of the hardware and the calls, so it's essential to consult an IT pro. Avaya and Cisco are among the vendors to consider. If you're upgrading from a pure PBX system, a VoIP gateway device can help make the transition. Once you have VoIP going, you should optimize your router and network to prioritize traffic and ensure high call quality.

Small businesses looking to ditch PBX landline phones can cut costs and increase productivity.

As for drawbacks, a hosted service may lack customization or may charge fees for adding features or users; it could leave you high and dry if it goes belly-up, too. With on-site VoIP, you risk the headaches and costs (including a large up-front investment) that come with managing any tech equipment in-house.

Before you make the switch, compare what you now spend on phone service with what you project to pay a VoIP provider. Figure in hardware and ongoing maintenance, and add the cost of a faster Internet connection, if needed. ●

CASE STUDY

Heating-Products Firm Saves With VoIP

JTG/MUIR, WHICH SELLS energy-efficient heating equipment, struggled with an aging PBX phone system. The Oakland, California, company turned to BoxIT to upgrade its system, and BoxIT chose VoIP. JTG/Muir threw out the NEC telephones on its staffers' desks to make way for Yealink SIP (Session Internet Protocol) phones.

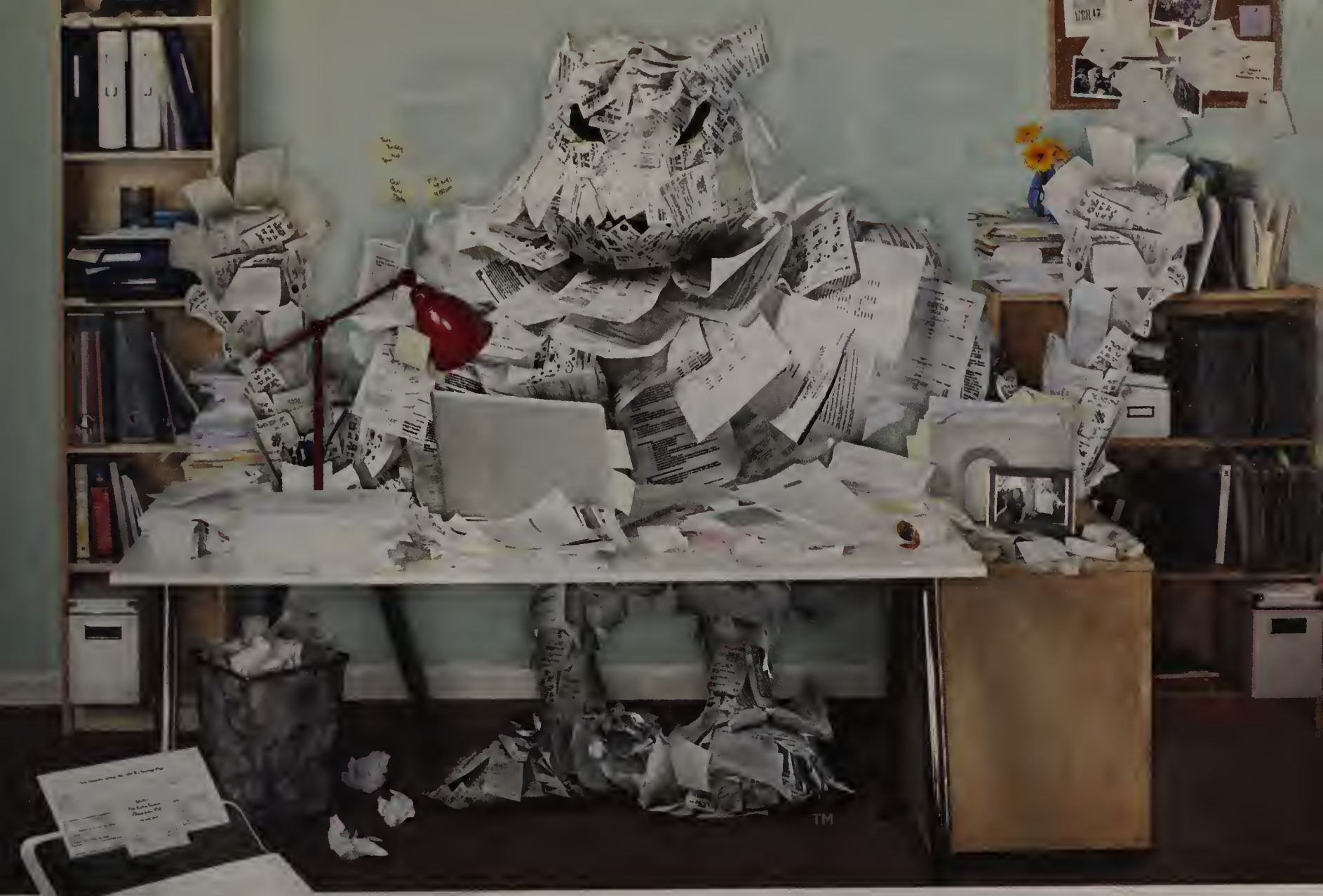
For the pipeline, BoxIT selected a Cbeyond Cloud Services SIP Trunk. It also chose a free, customizable Linux phone system with a Trixbox CE server, based on Asterisk software; this allows users to handle calls either on the Yealink phones or via the Counterpath Bria soft-phone app on a laptop, an iPad, an iPhone, or an Android handset. A Web-based Fop2 Flash operator panel allows staff to view who is on which call, and to transfer and record calls. Remote employees can use the Follow Me feature, which lets an office extension ring offsite. Voicemail sent as a .wav file can play on a smartphone or laptop.

In addition to providing flexibility for its staff, JTG/Muir is saving $1200 each month and enjoying three times the bandwidth of the PBX system.

—Case study submitted by BoxIT. Reach founder Thor Myhrstad at www.boxitweb.com or at 866/761-6148.

BOXIT'S Eric Hasler, Thor Myhrstad, Chhay Chea, and Matt Meier.

If you're an IT pro, and you'd like to contribute to *PCWorld* Tech Audit, e-mail techaudit@pcworld.com.



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Security Alert

What Are Your Kids Doing Online?

BY TONY BRADLEY

REMEMBER THOSE PUBLIC service announcements on TV that pointedly observed, "It's 10 p.m.; do you know where your children are?" In 2011 your children might be safely at home, sitting quietly in their rooms—but thanks to PCs, smartphones, and tablets, they can still be at risk roving in cyberspace. The threats they face while online are twofold.

1. Whereas movies and video games have rating systems to help parents determine what is appropriate, the Internet has no such rating system. Consequently it is up to parents to be aware of what their kids are doing, both online and on their phones.

2. Cyberbullying is a real and growing concern. Parents need to make sure that their children are neither victims of cyberbullying nor the ones engaged in digital assaults.

> Here's how to keep your children from getting into trouble online, without unduly encroaching on their individual privacy.

Parents can also use technology to track where their children go, and to keep an eye on smartphone and Internet activity to guard against inappropriate behavior and otherwise protect kids. Let's look at some things parents can do to properly keep tabs.

Keep Track of Where They Are

Services such as AT&T FamilyMap, Verizon Family Locator, and Sprint Family Locator let parents keep track of the physical whereabouts of their children by tracking the location of the kids' mobile phone (you can find links to all three of these services at find.pcworld.com/71755). The services do provide some peace of mind, but they also have some limitations.

These services do essentially the same thing: supply real-time location information that can be viewed from a PC or a smartphone, and display detailed information about the current location of the phone. The services enable parents to set automated alerts to notify them as to where a child is at a specific time of day, or when the child arrives safely at school, or home. Parents can also view short-term historical data of the child's locations.

When it works, a tracking service can pinpoint the location of the child (or at least the child's mobile phone) down to a specific address. However, depending on the service used and the mobile phone being tracked, the information may not be sufficiently accurate.

Mobile phones not equipped with GPS are tracked based on their proximity to the nearest cell tower. The device can still be tracked, but being able to determine that your child is somewhere within a 2-mile radius isn't all that helpful. Home, school, the mall, and many other things might be within that radius.

Monitor Smartphone Activity

For inappropriate activity and cyberbullying, you must monitor the activity on the smartphone, rather than its location. Teens engage in all types of inappropriate behavior—it defines being a teen to some extent. But sexting—sending inappropriate photos or comments via SMS messages—can have serious repercussions. And mobile phones can be used for interactions from »

CELYN BRAZIER

e-mail to instant messaging to social network updates—possible bullying outlets.

Parents should also be aware of what their children are doing with their smartphones. WebWatcher and SpectorSoft offer products for monitoring and logging smartphone activity. Available for BlackBerry and Android (with an iPhone version planned for late 2011), WebWatcher Mobile (find.pcworld.com/71773) logs all text messaging activity and e-mail messages. Parents can also set up keyword alerts to be instantly notified if specific inappropriate behavior is detected.

Likewise, SpectorSoft's eBlaster Mobile (find.pcworld.com/71774) is available for BlackBerry and Android smartphones. It provides more-comprehensive smartphone monitoring, including logs of every Website visited, every voice call made or received, and detailed GPS mapping info.

Be Their Internet Guardians

The PC is another area where parents need to monitor activity, to ensure that the child is not engaging in undesirable activities and is not a victim of online harassment or cybercrime. Both WebWatcher and SpectorSoft have PC versions of their monitoring products.

The PC versions are more robust than their smartphone counterparts. WebWatcher for the PC monitors other activity such as Websites visited, applications used, and instant messaging. It also logs all keystrokes and can perform periodic screen captures for a visual log of exactly what was on the PC at a given time.

SpectorSoft's eBlaster, like WebWatcher, gathers details such as applications used and keystrokes typed, but it sends me reports directly via e-mail.

My intent is not to shield my children from the realities of the world or of the Internet. But just as movie and video game ratings help determine what types of content are age-appropriate, I consider it one of my obligations as a parent to have an idea of what my children are doing with their PCs and smartphones.

BUGS & FIXES

Microsoft's Recent Security Updates

Plus: Mozilla adds stolen HTTPS certificates to blacklist.

JAMES MULROY

MICROSOFT RELEASED ONLY three security bulletins in March. And Mozilla updated its certificate blacklist (which it uses to help block malicious sites) to include nine stolen HTTPS certificates.

Microsoft's Patch Tuesday Update

Microsoft security advisories MS11-015, MS11-016, and MS11-017 address vulnerabilities in DirectShow, Windows Media Player and Media Center, Microsoft Groove, and Windows Remote Desktop Client.

The first bulletin, MS11-015, fixes a flaw in DirectShow (a multimedia framework for programmers), Windows Media Player, and Media Center. Left unpatched, the vulnerability could allow remote code execution if you open a malicious Microsoft Digital Video Recording (.dvr-ms) file. This bulletin is rated critical.

The other two bulletins are rated important: Attacks could be triggered if you opened a legitimate Groove-related file in the same network directory as a malicious library file; or if you opened a legitimate Remote Desktop configuration (.rdp) file in the same network folder as a malicious library file. Either situation could give an attacker remote access to your PC, if the attacker previously had access to the network directory that you use, or if you visit a directory containing these files.

To prevent your system from being exploited, you should install the updates as soon as possible using Windows Update. To learn more about each update—and to download them manually—visit find.pcworld.com/71717.

Mozilla Security Updates

Mozilla recently released ten security advisories, as well as an update to the HTTPS certificate blacklist. Of the vulnerabilities, eight are rated critical, two are rated high, and the last one is rated moderate.

The advisories address vulnerabilities in plug-ins, redirects, memory corruption, buffer overflows in JavaScript, and more for the Mozilla Foundation's Firefox 3.6.14 and 3.5.17, Seamonkey 2.0.12, and Thunderbird 3.1.8.

On March 15, attackers stole nine SSL (Secure Sockets Layer) certificates from Comodo, a certificate reseller. These certificates are documents that help provide security and privacy over the Internet and in certain applications (such as for accessing your bank account online); by checking a Website's "certificate," your Web browser can verify that the site you're visiting is the real site. Advisory 2011-11 updated the certificate blacklist to prevent misuse of the nine certificates.

To protect yourself, keep your browser up-to-date, using your browser's automatic update feature. For more information on the Mozilla updates, visit: find.pcworld.com/71718; find.pcworld.com/71719; and find.pcworld.com/71720.

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This Trojan Horse Fights App Piracy

THERE'S MALWARE, AND then there are Trojan horses like the latest "threat" discovered by Symantec. Android.Walkinwat is the Batman of mobile malware—a rogue vigilante seeking justice via means that skirt legality, but for a good cause.

If you pay for your mobile apps, you have nothing to fear from Android.Walkinwat. But if you make a habit of downloading pirated Android apps rather than paying for the legitimate version, you might run into this Trojan horse.

Android.Walkinwat poses as a pirated version of "Walk and Text"—a legitimate Android app. Users who install this version of "Walk and Text," though, are in for a surprise. The app gathers information from the Android smartphone, and then notifies the users that they have been caught downloading a pirate version.

Next, Android.Walkinwat adds public humiliation by sending an SMS text message to all contacts on the smartphone with the text, "Hey, just downloaded a pirated App off Internet, Walk and Text for Android. Im stupid and cheap, it cost only 1 buck. Don't steal it like I did!"

A Symantec blog post describes how Android.Walkinwat uses a routine called "LicenseCheck"—a function typically used by legitimate Android apps for license management in conjunction with a Licensing Verification Library developed to help prevent piracy.

A Symantec spokesperson explains, "Although this isn't the first case of digital vigilante justice being used as means to send a message against piracy, it is the first of its kind discovered in the mobile threat landscape."

The moral? Someone, somewhere invested time, effort, and ingenuity to design an app, and deserves to get paid.

—Tony Bradley

PRIVACY WATCH

An Antidote for Facebook Privacy Woes

ALEX WAWRO

Concerned about your personal data's security on Facebook? Consider an open-source alternative like Diaspora.

IN THIS INFORMATION economy, our social networks say a lot about us. When you register on a Website like Facebook, you voluntarily give up personal information like your name, photo, and phone number in exchange for the privilege of access to a network that makes it easy to keep in touch with friends and family. Facebook then makes money aggregating that information for sale to advertisers looking to target groups of potential customers with specific ages and interests. To be clear, Facebook adheres to a privacy policy that permits the sharing only of "non-personally identifiable attributes" with advertisers.

But you never retain complete control over the data you post; Facebook reserves the right to use your name and image to promote any product or service you endorse (your Facebook friends may already be seeing ads for the latest summer blockbuster, with your face attached). If you use the GPS function on your phone to check in at the local REI outlet, and if REI has paid for a Facebook Sponsored Story ad campaign, then your name and the details of your check-in may well appear without your knowledge as an ad promoting the REI brand to your friends and family.

An Open-Source Alternative

Diaspora is open-source software that duplicates the functions of a social network like Facebook while ensuring that users retain full control and ownership of everything they share on the network; instead of first uploading photos to Facebook and then choosing who gets to see them, Diaspora users can simply share photos directly with each other, without having to go through a corporate middleman or having to agree to a company's not-so-strong privacy policy.

No central Diaspora network or Website exists. The code is freely available online, so anyone with a server handy can host a Diaspora server that you can join. The software is still in development, but an alpha version is available, and several Diaspora servers are operational. The servers (known as "pods") let registered users store data (such as mail and photos) and maintain their own personal profile. Every pod is different: Some are invitation-only, some have space limits, and some are more secure than others. (Sign up at: https://joindiaspora.com.)

Sound lonely? Invite friends and family to register a Diaspora account on whichever pod suits their fancy; you can then share as much or as little as you like with each other, even if everyone is on different pods. If Facebook is like one big desert island, Diaspora is like an entire archipelago, a chain of private islands linked with bridges built and controlled by the users. Give it a look. ●

ILLUSTRATION: GARY NEILL

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Reviews & Rankings

Printer Ink Refills Can Save You Money

INKTEC KITS COME with syringes, ink, and a clip for securing the cartridge.

Take one inkjet, try refilled and remanufactured cartridges on it, and what do you get? Mostly small hassles—and some big savings.

CHEAP INK: It's what every inkjet printer user wants. But although refilled and remanufactured cartridges are less pricey than printer vendors' ink, they come with dire warnings about drips, disappointing quality, or printer damage.

Are third-party inks worth the risk? To find out, you could try them yourself—and possibly sacrifice your printer in the process—or commission a laboratory to run exhaustive tests. *PCWorld* did the latter three years ago for our article "Cheap Ink: Will It Cost You?" (find.pcworld.com/61294).

Birth of a Serial Refiller

But now we're trying a third way—the Serial Refiller way. *PCWorld* sent intrepid writer Jeff Bertolucci an HP Photosmart e-All-in-One inkjet multifunction printer (find.pcworld.com/70479), a model whose cartridges are popular among third-party ink vendors, and assigned him this mission: Try a bunch of refills and let us know what happens. To date, he has replaced the original inks with four different refilled or remanufactured options. For each test, he printed a variety of samples repeatedly until streaks began to appear, at which point he could calculate the cost per page and also examine print quality.

The baseline: The HP 60 black and color cartridges

PHOTOGRAPHS: ROBERT CARDIN

45 SAMSUNG GALAXY S 4G

46 FUJIFILM FinePix Real 3D W3

54 BOXEE BOX by D-Link

that came with the Photosmart e-All-in-One produced 132 fully printed pages. At $35 for both cartridges (when purchased separately), the cost per page works out to a high 27 cents. (HP's 60 Ink Cartridge Combo Pack, priced at $32, saves a few bucks.)

Each of the four options we've tried so far offers its own approach and its own array of supported printers—mostly older printer models, as third-party vendors need time to create their alternative cartridges and inks. Cartridge World's service tends to cater to older models. Among newer models supported, InkTec sells a do-it-yourself refill kit that works for numerous Lexmark models, including the Genesis (find.pcworld.com/71048), Platinum Pro905 (find.pcworld.com/63602), and Pinnacle Pro901 (find.pcworld.com/70031). Costco's refilling service supports both the HP unit we used and the HP Envy100 e-All-in-One (find.pcworld.com/71056). Office Depot's service supports newer printers such as the HP Officejet 6500A Plus e-All-in-One (find.pcworld.com/71701).

So far we've found that the bigger the hassle involved, the better the savings—but output quality varies. The best balance we've seen has come from Costco: Its refilling service is convenient, and it delivers acceptable print results for half the cost of HP's inks.

What Are the Risks?

The risks of using third-party inks are unpredictable. Using such inks will not void your printer's warranty; however, the warranty won't cover any damage that might occur as a result of that use.

Ink spillage during refill or use is probably the biggest risk, creating a mess at best and possibly damaging the cartridge or printer at worst. We have also had to endure a lot of pop-up dialog boxes and control-panel warnings. Such messages can be intimidating and persistent, but usually you can click OK to dismiss them.

The Serial Refiller's short-term experiences are anecdotal, and they do not test the durability or archivability of third-party inks, nor how the printer will fare after repeated use with them. Nevertheless, our hands-on tests offer a taste of what you can expect if you try a third-party alternative with your own printer.

CARTRIDGE WORLD REPLACEMENT cartridges are convenient, but how much you save depends on where you buy them.

The Cheapest: InkTec

InkTec's refill kits are good for multiple refills. The kits include an injection needle for each color, a pair of plastic gloves, and a suction syringe to clean the cartridge nozzles. A sticker affixes to the top of the ink cartridge to mark the hole (built into the cartridge by HP) for refilling.

The refill process can get messy. Our first attempt to refill the cyan tank resulted in an overflow. And once the refill was complete, we had to clean the cartridge nozzles. Doing so took several steps: using the suction syringe to drain a little ink from the nozzles; then dabbing the nozzles manually; then reinserting the cartridge in the printer; and finally running the printer's nozzle-cleaning utility.

We reinserted the black cartridge without incident, but reinserting the tricolor one prompted two low-ink alerts. After we produced three sets of perfectly good prints, the printer's LCD posted the dire message: 'Original HP Ink »

MORE ONLINE

» For a more detailed look at the Serial Refiller's adventures with ink, go to find.pcworld.com/71767.

STICKERS IN THE InkTec kit (top two cartridges) help you find the holes for injecting ink.

If syringes

and ink-cartridge surgery don't make you squeamish... do-it-yourself refill materials such as the InkTec kit could be a good buy.

Depleted. Print cartridge(s) refilled or depleted. Replace Cartridge(s) or press OK to continue.' Pressing *OK* permitted the printer to resume. The refill process for the black and color cartridges took us about an hour and a half, with careful reading of the instructions. A more practiced user would probably require 30 minutes or less.

Although the refill process was messy, the results were surprisingly good. We found no visible difference between the pages printed with HP's inks and those using the InkTec inks. Water affected each ink's output similarly, with streaking and color bleeding.

If you're considering the InkTec route, you'll have to weigh several trade-offs. First of all, our InkTec-refilled cartridge lasted just 90 pages, far less than HP's inks. That means you'll be messing with syringes to refill the cartridge more frequently, especially if you print in high volume. But with that extra hassle comes considerable savings: InkTec's cost per page is just 2 cents, more than 90 percent cheaper than HP's own inks.

Any refill kit comes with caveats, however. Repeated refills of a printer cartridge could lead to leaks, clogs, or substandard output. Even if you have no issues, ink spills and cartridge cleanings could lower the number of refills you'll get out of your investment in the kit. If syringes and ink-cartridge surgery don't make you squeamish, though, do-it-yourself refill materials such as the InkTec kit could be a good buy.

The Best Option Overall: Costco

Costco refills dozens of specific Canon, Dell, HP, and Lexmark cartridges, listed in a brochure and on Costco's Website. Refilling the HP 60 black and tricolor cartridges costs $8 each, or $16 total (plus tax)—less than half the cost of the two HP 60 cartridges. Costco says that each ink cartridge is good for five to ten refills, depending on how well you care for it, and the company offers advice to aid in your cartridge's longevity.

Just bring empty cartridges to a Costco warehouse store that offers the service. Costco generally promises to refill cartridges in 1 hour—enough time for you to wander around and try food samples or stock up on jumbo supplies.

Our Costco-replenished HP 60 tanks prompted depleted-ink complaints from our printer, but worked well otherwise. Prints were of adequate quality, though inferior to the original HP samples: Text looked less sharp, and images were not as bright. Each had some streaking and color bleeding when exposed to water.

Costco promises to "closely match or exceed" the level of ink that comes in a new cartridge, and in our test it succeeded in that respect: Our refill yielded 148 fully printed pages—16 more than we got with HP's ink. The cost per page was 11 cents, compared with 27 cents for the HP inks.

It would make no sense to join Costco, which charges $50 or more for an annual membership, solely to refill ink cartridges. But if you're already a Costco member and your printer's cartridges are on the store's list, you could save big. Although our Costco ink's output quality was not quite as good as HP's, the refilling is so easy and so cheap that for some people it might be worth the trade-off.

Office Depot: Good Enough?

Remanufactured cartridges are the second-best alternative to the printer vendor's own inks, as they come boxed, tested, and ready to go—no messing around with empty shells. Unfortunately we've been underwhelmed with the two we've tried so far, offerings from national retail chain Office Depot and international franchise Cartridge World.

Office Depot's OD640WN is an HP 60 black cartridge filled with Office Depot house-brand ink; the OD643WN, meanwhile, is a remanufactured HP 60 tricolor tank. One tip: Office

PRINTER INK ALTERNATIVES

	INK SUPPLIER	Rating	Cartridge pricing	Page yield / Cost per page
1	COSTCO find.pcworld.com/71698	★★★☆☆ GOOD	• HP 60 Black: $8 • HP 60 Color: $8	• Yield: 148 pages • Cost per page: 11 cents
	▸ The warehouse store's machine-refill service is inexpensive and easy to use, and the ink's print quality is acceptable.			
2	InkTec find.pcworld.com/71695	★★★☆☆ GOOD	• HPI-4060D (black): $13 • HPI-4060C (color): $17	• Yield: 90 pages • Cost per page: 2 cents • Kit refills up to 10 black and 25 color HP 60 cartridges
	▸ Refilling cartridges yourself with ink bottles and a syringe can be messy, but the savings you can achieve are phenomenal.			
3	hp find.pcworld.com/71768	★★★☆☆ GOOD	• 60 Black Ink Cartridge (CC640WN): $15 • 60 Tricolor Ink Cartridge (CC643WN) : $20	• Yield: 132 pages • Cost per page: 27 cents
	▸ Although HP's original inks produced the best output quality of any inks in our tests, the cartridges' cost per page is high.			
4	Office DEPOT find.pcworld.com/71697	★★½☆☆ FAIR	• OD640WN (black): $12 • OD643WN (color): $16	• Yield: 134 pages • Cost per page: 22 cents
	▸ The small savings you get with the office-supply retailer's remanufactured cartridges isn't worth the decline in output quality.			
5	Cartridge World find.pcworld.com/71696	★★½☆☆ FAIR	• CWH-60K (black): $15.32 (online) • CWH-60Tri (color): $18.55 (online)	• Yield: 156 pages • Cost per page: 23 cents
	▸ Output quality is acceptable, but individual savings are uncertain, since pricing varies by store and on the company's Website.			

CHART NOTE: Rankings are based on single-use experiences, as of 3/25/11.

Depot also collects spent cartridges of any make and gives you a $2 in-store credit for each one. Not counting the store credit, the two cartridges cost almost $28 before tax—about $7 less than the HP 60 standard-size black and tricolor cartridges (when purchased separately).

We first inserted the Office Depot remanufactured cartridges and ran a printhead-alignment procedure. We then began printing—or at least we tried to, amid incessant on-screen alerts indicating that we were not using a genuine HP cartridge. No sooner had we dismissed one deeply distressed dialog box than a new one quickly took its place.

The pages we printed with Office Depot inks were barely worth all that fuss. The HP ink's black output was noticeably darker, and text appeared bolder and sharper; skin tones seemed smoother, and colors looked more vibrant. As we expected, water droplets created streaking and color bleeding on printed pages using both the Office Depot inks and the HP inks.

Page yields were a draw compared with the manufacturer's original inks: Office Depot's rebuilt tanks lasted for 134 pages, versus 132 for the HP inks. Based on those page yields, Office Depot's inks cost 22 cents per page, versus 27 cents from HP. If merely satisfactory output meets your needs, Office Depot's inks do deliver; the better results of HP's own cartridges are just a few dollars away, however.

Cartridge World Savings Vary

Cartridge World sells toner and ink cartridges for various printers, including Canon, Dell, HP, and Lexmark models. You've probably seen one of Cartridge World's 650 stores in the United States and Canada; 1700 exist worldwide. You can also buy direct from the company's Website.

Because of Cartridge World's franchise model, pricing differs widely—and wildly. At a Los Angeles store, we paid $11.99 for the black cartridge and $15.99 for the tricolor cartridge. The online prices were significantly higher: $15.32 for black and $18.55 for tricolor. Tack on $1.99 for shipping, and the total is $35.86 (plus tax). Meanwhile, a Cartridge World store in Akron, Ohio, charges just $9.71 for black and $11.93 for tricolor.

Like remanufactured cartridges from other sellers, Cartridge World tanks are visually indistinguishable from the printer maker's, aside from the stickers on the top and side.

Printing was uneventful, save for HP error messages. As with most third-party inks we've tested, however, Cartridge World's output quality was inferior to HP's: With the latter inks, grayscale photos looked crisper and more realistic, while color images were sharper and more vibrant. In water-drop tests, Cartridge World's inks smeared no more and no less than HP's did.

To Cartridge World's credit, its cartridges outlasted their HP counterparts, yielding 156 pages; that's 19 cents per page as bought from the Los Angeles store. Purchased at the online prices, the cost rises to 23 cents per page. If you go to the Akron, Ohio, store you'll pay 14 cents per page.

Cartridge World's products worked acceptably. But given the wide disparity in pricing, though, the savings you'll enjoy are unpredictable.

—Jeff Bertolucci and Melissa Riofrio

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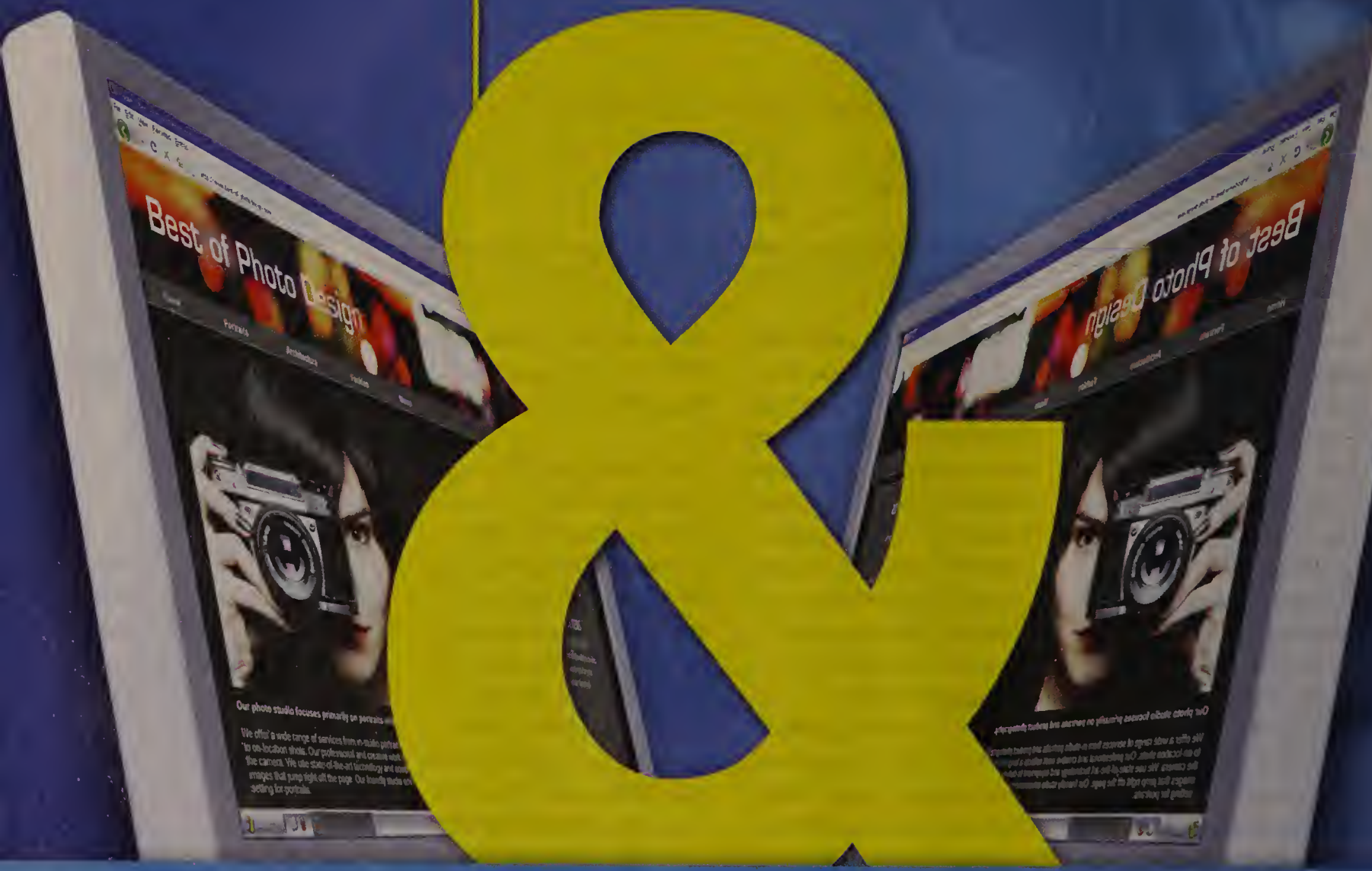

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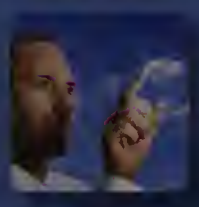

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IOMEGA'S SuperHero is slim and elegant.

★★★★☆ VERY GOOD

SuperHero | Iomega

Great tool for Windows users to back up their iPhone contacts.

List: $70

find.pcworld.com/71745

Iomega SuperHero Syncs, Backs Up

THE IOMEGA SUPERHERO backup and charging dock for iPhone goes above and beyond the typical dock. Together with a free app you download to the iPhone, the $70 SuperHero makes backing up contacts and photos a smooth, hassle-free affair—especially for iPhone owners who use Windows.

The SuperHero is slim and elegant, a metallic rectangular base—but you also need a comparatively bulky extra charger to power up the base. The back of the SuperHero has an SD Card slot, for backing up your contacts and photos to a card.

To use the dock, you must download the SuperHero Backup app from the App Store. Once loaded, it gives you three impossible-to-miss buttons: Backup, Restore, and Options.

The Options menu is clearly constructed and outlines your backup and restore choices. While I wish it had options to limit backups and restores by date, its simplicity is welcome.

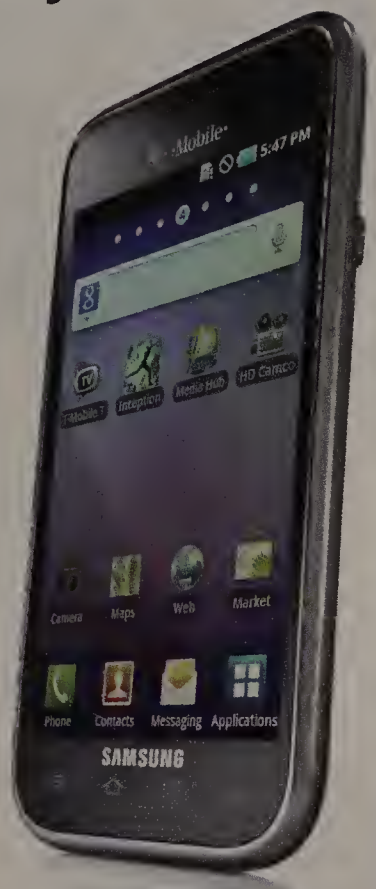
Transfer speeds can be sluggish for photos and will depend on what grade of SD Card you use. And owing to Apple's restrictions, the dock can back up only photos in your photo roll—not videos, apps, or music. The SuperHero shines, though, in backing up contacts. Apple's own iTunes doesn't back up contacts for Windows users, so we need third-party alternatives.

The SuperHero is such an alternative. I quickly and successfully backed up and restored contacts from an iPhone 3GS to an iPhone 4; the SuperHero simply added my older contacts to the iPhone 4.

For that alone, I can heartily recommend the SuperHero.

—Melissa J. Perenson

Samsung Galaxy S 4G: Solid, Speedy



SAMSUNG'S GALAXY S 4G is an excellent phone.

AS PART OF its aggressive 4G plans, T-Mobile has launched the Galaxy S 4G ($200 with a two-year contract), a 4G model in the popular Samsung Galaxy S line of phones.

Like the Samsung Vibrant in size, the phone is 4.8 by 2.5 by 0.4 inches and weighs a light 4.2 ounces.

And like other current Galaxy S phones, the 4G has a 4-inch Super AMOLED screen, which puts touch sensors on the display itself. This design allows for a thin phone as well as bright colors and crisp details. However, this is not the brand-new Super AMOLED Plus display technology, which produces richer colors and high visibility indoors and out—and which AT&T's Samsung Infuse 4G carries.

The phone runs Samsung's TouchWiz 3.0 user interface over Android (specifically, Android 2.2, rather than the newer Android 2.3, aka Gingerbread).

Like HTC and its Friend Stream offering, Samsung has its own social media aggregator, Social Hub, combining streams from your Facebook, MySpace, and Twitter accounts into a single view.

Other features of note include the TouchWiz music player, the Samsung Media Hub (Samsung's answer to iTunes), T-Mobile video chat, Kindle for Android, and a 5-megapixel camera (with no flash). The HD camcorder can shoot up to 720p video.

In San Francisco, our download speeds ranged from 2.6 mbps to 6.5 mbps, depending on the neighborhood (in theory, peak speeds could be much higher). Pages loaded quickly, if erratically.

Call quality over the T-Mobile network was really good. Unlike with the Vibrant, I didn't have any dropped calls, and voices sounded crystal clear. Callers on the other end of the line were also pleased with the audio quality, and could hear me perfectly.

The Galaxy S 4G is a great phone, but other than its 4G-ness, it already feels a bit like last year's superphones. If you want the latest, greatest, and fastest in phones, the Galaxy S 4G might not cut it.

—Ginny Mies

★★★★☆ **VERY GOOD**

Galaxy S 4G | Samsung

This solid unit can't compete with Super AMOLED Plus phones.

List: $200 with two-year contract

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Fujifilm FinePix Real 3D W3: 3D Camera

THE FINEPIX REAL 3D W3 has both 3D and 2D modes.

THESE DAYS, A number of compact cameras take 3D photos, but the $500 Fujifilm FinePix Real 3D W3 is the most full-featured. Its two lenses and sensors let it shoot 3D video as well as still photos—a 3D camera first. It offers 2D shooting modes, too.

It's also hard to rate, since it's as groundbreaking and advanced as it is frustrating. The best 3D camera we've tested to date, it still has its share of quirks. Despite wow-factor features (a glasses-free display, manual controls over aperture and parallax settings, and compose-your-own 3D modes that give you independent control over each lens), it's not for everyone: The display can induce headaches, the manual controls are hit-or-miss, and getting the hang of composing 3D shots takes a bit of time.

If you're fearless enough to experiment extensively with the camera's controls, and if you can view its 3D images and videos on a 3D-capable TV, it may be worth the purchase. But be sure to get some hands-on time with it before you buy to see if it suits you.

Generally, the W3's 3D output looked better on a big screen than any similar camera's images and video that we've seen to date, and it's your most-versatile pocketable option at the moment.

The W3's range of 3D shooting modes and realistic 3D effects are its main drawing points, but make sure your 3D setup gets the most out of its images and video. At $500, it's a significant investment.

For adventurous consumers, the Real 3D W3 is an innovative entrée into the world of capturing 3D video and images.

—Tim Moynihan

★★★☆☆ **GOOD**

FinePix Real 3D W3 | Fujifilm

Though versatile and innovative, it's for brave early adopters.

List: $500

find.pcworld.com/71744

Zyxel's Versatile Broadband Travel Router

ZYXEL'S PORTABLE router.

A MOBILE BROADBAND router, which turns a wireless broadband connection into a Wi-Fi hotspot, can be indispensable for people who travel with companions or groups. Novatel Wireless's MiFi devices are great examples, but a MiFi supports only the carrier that sells it.

Zyxel's $85 MWR211 Portable Router overcomes this limitation, turning almost any carrier's USB broadband modem into a Wi-Fi hotspot.

About the size of a deck of cards, the MWR211 may require some configuration, so it lacks the MiFi's ease of use. But because it lets you employ whatever USB modem is handy as your broadband source, the MWR211 far outstrips the MiFi in versatility, letting you swap a USB modem in from a network with better coverage or a cheaper plan.

It also has an ethernet port to support a wired broadband source—a cable or DSL hookup in a hotel or an office, say. And you can opt to keep a wireless USB modem connected as a backup, a feature that you have to enable during setup (Zyxel provides detailed instructions online).

The MWR211 supports 802.11n Wi-Fi, but only on the 2.4GHz band; that means it's backward-compatible with 802.11b/g devices but not 802.11a gear. The unit also supports Wi-Fi Protected Setup, which sets up Wi-Fi security with devices that are not themselves secure.

Zyxel's documentation links to a page on the company's Website showing which USB modems it supports, and my unit came with some setup tips for use with U.S. carriers. You also have to activate your USB modem before using it with the MWR211.

One major disappointment: Battery life isn't terrific. I'd try to keep the AC adapter connected when possible.

Overall, I was impressed with the MWR211 router as a tool for frequent travelers.

—Yardena Arar

★★★★☆ **VERY GOOD**

MWR211 Portable Router | Zyxel

A great tool for travelers who want to switch carriers on a trip.

List: $85

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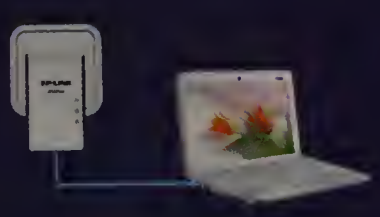

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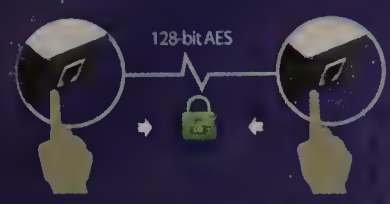

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Nintendo 3DS Takes No-Glasses 3D Mainstream

YES, THE NINTENDO 3DS's splashy, glasses-free 3D is impressive, creating clever and often fascinating gameplay. No, the preloaded games and apps and snazzy new features aren't slam dunks. Yes, Nintendo has once again built a piece of gaming gear that takes big risks; while some pay off, others remain unproven. And yes, for the $250 Nintendo's asking, you'll probably want to buy one if you're a steadfast Nintendo fan.

But only probably. If you couldn't care less about stereoscopic 3D, or prefer not to fiddle with fussy menus or social networking apps, the 3DS likely isn't for you.

THE NINTENDO 3DS offers 3D gameplay without special glasses, and other features.

Nintendo loads the 3DS with all you need to get started, plus a few extras. The large box contains an AC adapter, the manual and setup instructions, a drop-in-place charge cradle, a pack of "augmented reality" cards, and the 3DS itself, which includes both a telescoping stylus and a preinstalled 2GB SD storage card.

The new Home menu button serves as the handheld's "get out of anything" option, suspending apps or games and giving you quick access to other system functions.

Getting the 3D effect working properly takes a while, and the system still exhibits signs of a work in progress. Some features feel underdeveloped, and we weren't able to test some sharing features (Nintendo still seems to be figuring things out).

That said, we've never had a handheld quite like the 3DS—one as brimming with features as well as potential, and offering an experience that other mobile devices can't match. If you want the next big idea from Nintendo, this is it.

—Matt Peckham

★★★☆☆ **VERY GOOD**

3DS | Nintendo

Though it takes getting used to, Nintendo fans will want the 3DS.

List: $250

find.pcworld.com/71748

Package Lets You Record Your Gaming Triumphs

ROVI'S ROXIO GAME Capture aims to solve an age-old problem for gamers: how to preserve those shining moments of victory. The $100 Game Capture is a hardware and software bundle aimed at helping you record your PC and console gaming adventures, but it falls short.

Setup is relatively simple. It's an external USB-powered video-capture device, so you just plug the USB cable into your PC, plug your game console's audio and component video cables into the box, and then connect the box to your TV. The advertised system requirements are fairly low (Windows XP, 1.8GHz Intel Core 2 Duo or 2GHz AMD Athlon X2 64 CPU, a DirectX 9.0 graphics card, and 2GB of RAM), so your PC shouldn't have to be a gaming beast to work with the Roxio package.

ROVI'S ROXIO GAME Capture kit does the job, up to a point.

The accompanying app is a no-frills video-capture utility: It has a preview window and a few settings you can tweak, such as the video encoder (AVI, DivX, WMV) and default saving location; you'll also see basic storage stats so you don't fill up your hard drive unexpectedly, as well as a big Start/Stop Recording button.

The capture hardware is equally no-frills. While you can capture video in high-def formats, it can output only 480p. Also, you can't use HDMI cables—it supports only component video.

Separately, the Roxio Game Capture device functioned perfectly as a video input for other video applications.

The kit captures and shares your gaming, but this is not as easy as it should be, nor is it cheap enough for what it does.

—Patrick Miller

★★★☆☆ **GOOD**

Roxio Game Capture | Rovi

It's relatively inexpensive and easy to set up, but buggy.

List: $100

find.pcworld.com/71752

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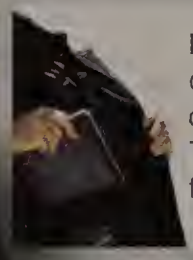

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Photos provided by SeV Fans. Find us on Facebook for more!

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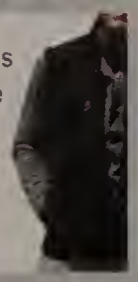

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	MODEL	Rating	Performance	Features and specifications
1	BEST BUY Lenovo H320 $699 NEW find.pcworld.com/71706	★★★★½ SUPERIOR	• WorldBench 6 score: 129 • WorldBench 6 rating: Superior • Dverall design: Very Good	• 3.2GHz Core i5-650 • 6GB RAM; 640GB storage • Nvidia GeForce 310 • Blu-ray Disc drive
	▸ The H320 performs very well for its category, and features Blu-ray and high-def support—all for under $700.			
2	HP Pavilion s5660f $730 NEW find.pcworld.com/71707	★★★☆☆ GOOD	• WorldBench 6 score: 119 • WorldBench 6 rating: Superior • Dverall design: Fair	• 2.2GHz Phenom II 840T • 6GB RAM; 1TB storage • ATI Radeon HD5450 • Blu-ray Disc drive
	▸ It's small and inexpensive, and offers fast performance, 1TB of storage, and a high-def Blu-ray drive—but it's not upgradable.			
3	Dell Inspiron 580s $469 find.pcworld.com/69991	★★★☆☆ GOOD	• WorldBench 6 score: 119 • WorldBench 6 rating: Superior • Overall design: Fair	• 2.93GHz Core i3-530 • 4GB RAM; 320GB storage • Intel integrated graphics • DVD±RW
	▸ Storage space is lacking, and the case leaves much to be desired; however, you can't argue with the performance or the price.			
4	Acer Aspire M3400 $540 find.pcworld.com/70891	★★★☆☆ GOOD	• WorldBench 6 score: 110 • WorldBench 6 rating: Very Good • Overall design: Good	• 2.8GHz Phenom II X4 820 • 6GB RAM; 640GB storage • ATI Radeon 5450 • DVD±RW
	▸ Acer's Aspire M3400 puts up a good fight—but competing, similarly priced systems have features that are just a bit better.			
5	Gateway SX2311-03 $599 find.pcworld.com/70893	★★★☆☆ GOOD	• WorldBench 6 score: 108 • WorldBench 6 rating: Very Good • Overall design: Fair	• 2.8GHz Phenom II X4 820 • 4GB RAM; 1TB storage • Nvidia GeForce 9200 • DVD±RW
	▸ Gateway's compact desktop simply doesn't have room for anything extra, and its lack of space versus competing systems is distressing.			
6	HP Pavilion p6720f $530 NEW find.pcworld.com/71708	★★½☆☆ FAIR	• WorldBench 6 score: 114 • WorldBench 6 rating: Very Good • Overall design: Fair	• 2.9GHz Phenom II X4 840T • 6GB RAM; 1TB storage • ATI Radeon HD 4200 • DVD±RW
	▸ Swift and sporting lots of RAM and hard-drive capacity, this PC is an excellent choice for people who need to focus on their work.			
7	HP Pavilion p6540f $700 find.pcworld.com/70892	★★½☆☆ FAIR	• WorldBench 6 score: 114 • WorldBench 6 rating: Very Good • Overall design: Fair	• 2.8GHz Phenom II 830 • 8GB RAM; 1TB storage • ATI Radeon HD 4200 • DVD±RW
	▸ The Pavilion p6540f is a great system for the everyday user—but if you're hoping to upgrade or play games, look elsewhere.			
8	HP Compaq 8000f Elite Ultra Slim Desktop $830 NEW find.pcworld.com/71709	★★½☆☆ FAIR	• WorldBench 6 score: 113 • WorldBench 8 rating: Very Good • Dverall design: Good	• 3GHz Core 2 Duo E8400 • 2GB RAM; 160GB storage • Intel integrated graphics • DVD±RW
	▸ HP's Compaq 8000f Elite offers business-centric performance in a bite-size PC, but fumbles on a few essentials.			
9	HP Pavilion p6640f $600 NEW find.pcworld.com/71771	★★½☆☆ FAIR	• WorldBench 8 score: 116 • WorldBench 6 rating: Superior • Dverall design: Fair	• 2.8GHz Phenom II X4 925 • 8GB RAM; 1TB storage • ATI Radeon HD 4200 • DVD±RW
	▸ The p6640f tries to offer a competitive buffet of features for its low price, but the meal isn't as satisfying as what you'll find elsewhere.			
10	Acer Aspire X3400 $600 find.pcworld.com/70894	★★☆☆☆ FAIR	• WorldBench 6 score: 104 • WorldBench 6 rating: Very Good • Overall design: Fair	• 2.9GHz Athlon II X3 435 • 4GB RAM; 500GB storage • Nvidia GeForce 9200 • DVD±RW
	▸ Acer's inexpensive Aspire X3400 makes a good showing for its reasonable price. The keyboard has a few extra buttons.			

CHART NDTES: Ratings are as of 4/1/11.

MORE ONLINE Visit find.pcworld.com/70016 to see in-depth reviews, full test results, and detailed specs for each desktop on this chart.

Winzip Suite: Utilities As a Subscription Service

THE WINZIP SYSTEM Utilities Suite gathers many useful features under one friendly roof. Among them: disk optimization, hard-drive SMART data retrieval, a drive benchmark, file encryption, duplicate file removal, file cleanup, file undelete, secure delete, system file backup, Registry cleaning and optimization, a driver updater, and a startup manager.

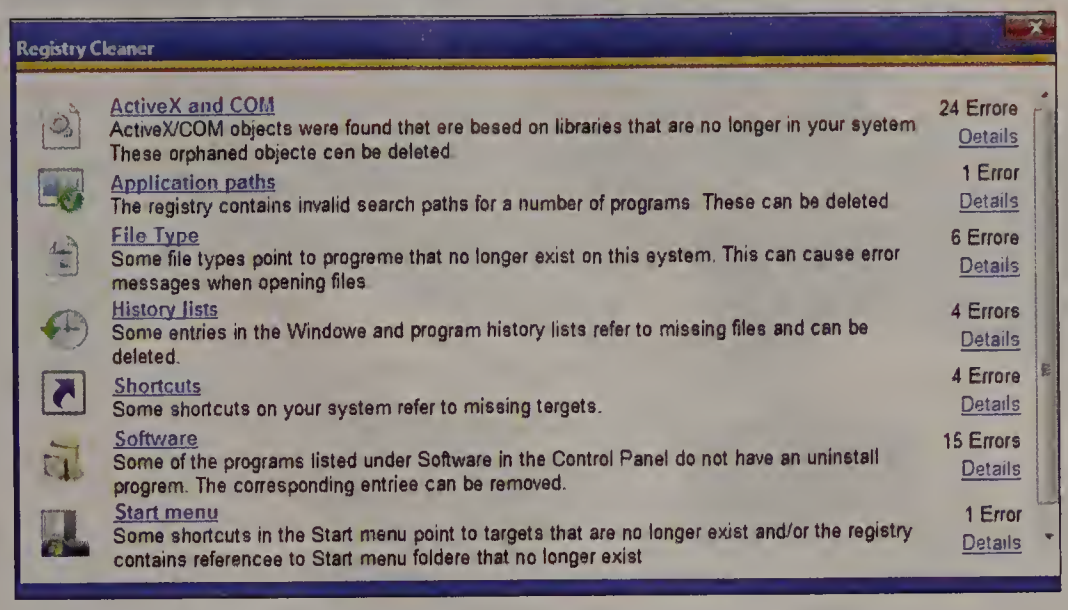
The suite also supplies a PC Fixer for solving common Registry problems, categorized by symptom. The suite's Security and Performance advisor is useful, too, though some of the advisor's recommendations were unwarranted.

One unique feature of the suite is its game optimizer, which lets you run your game without interference from Windows or from other system processes.

Winzip System Utilities is subscription based, and certain modules (such as the driver updater) will stop functioning when your $40 yearly subscription expires. Winzip will automatically e-mail you and then renew your subscription for an additional year until you tell it not to.

Despite good performance and convenience, Winzip System Utilities doesn't do much that Window 7 and a few well-chosen freebies can't do.

—Jon L. Jacobi



ONE OF THE Winzip suite's many utilities is a clear and effective Registry cleaner.

★★★☆☆ **GOOD**

Winzip System Utilities Suite
Winzip

Comprehensive PC utility suite offers little you can't get for free.
List: $40 yearly subscription
find.pcworld.com/71775

Paragon's Useful Tools for Managing Your Hard Drive

PARAGON HARD DISK Manager Suite has been a top hard-drive utility for several iterations. Hard Disk Manager Suite 2011 ($50) adds support for new hard-drive technologies, plus help in optimizing a drive or switching to an SSD.

The updated suite's feature list includes partitioning tools, imaging of partitions for back-up and recovery, defragging of FAT and NTFS partitions, secure data wiping, boot-sector repair, boot management for running multiple operating systems, and data restoration to diverse hardware.

PARAGON'S HARD DISK Manager spells out several partitioning options.

In my hands-on testing, the suite exhibited a few minor interface flaws. For the most part, I found the apps easy to use, but some redundancy between the tasks pane and the task bar adds complexity. Also, some functions, such as hard-drive defragging, are available only from the launcher application.

The newest Linux and Windows PE 3.0 boot CD images seem to alleviate past versions' failure to support newer hardware, a problem that afflicts many other recovery and hard-drive utilities that use Linux boot discs.

Minor interface gripes aside, Hard Disk Manager Suite 2011 remains the most comprehensive disk management tool available. For the price, you can't beat this package.

—Jon L. Jacobi

★★★★☆ **VERY GOOD**

Hard Disk Manager Suite 2011
Paragon Software

Hard-drive utility suite adds subtle but powerful improvements.
List: $50
find.pcworld.com/71776

Top 10 Inkjet Multifunction Printers

LAB TESTED

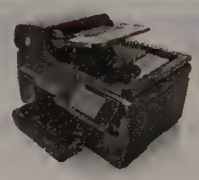
	MODEL	Rating	Performance	Features and specifications
1	 HP Officejet Pro 8500A Plus $300 find.pcworld.com/70999	★★★★☆ VERY GOOD	• Text quality: Superior • Graphics quality: Very Good • Tested speed: 10.6 ppm text/ 2.4 ppm graphics	• USB, ethernet, wireless connectivity • 250-sheet input, automatic duplexing • Lowest vendor-specified ink cost per page: 1.6 cents black, 7.2 cents for all four colors
	▸ Touch-sensitive controls, inexpensive inks, and a legal-size scanner raise the Officejet Pro 8500A Plus above the competition.			
2	Canon Pixma MG8120 $300 find.pcworld.com/70506	★★★★☆ VERY GOOD	• Text quality: Very Good • Graphics quality: Very Good • Tested speed: 8.3 ppm text/ 2.3 ppm graphics	• USB, ethernet, wireless connectivity • Two 150-sheet inputs, automatic duplexing • Lowest vendor-specified ink cost per page: 4.9 cents black, 14.2 cents for all four colors
	▸ A generous feature set and great performance make this multifunction printer a good fit for a home or small office.			
3	Canon Pixma MG6120 $200 NEW find.pcworld.com/71711	★★★★☆ VERY GOOD	• Text quality: Very Good • Graphics quality: Very Good • Tested speed: 7.6 ppm text/ 2.4 ppm graphics	• USB, ethernet, wireless connectivity • Two 150-sheet inputs, automatic duplexing • Lowest vendor-specified ink cost per page: 4.9 cents black, 14.2 cents for all four colors
	▸ A touch-sensitive control panel lifts the well-equpped, reasonably fast Pixma MG6120 to a ranking above similarly priced rivals.			
4	Epson Artisan 725 Arctic Edition $200 find.pcworld.com/71155	★★★★☆ VERY GOOD	• Text quality: Good • Graphics quality: Very Good • Tested speed: 7.4 ppm text/ 3.0 ppm graphics	• USB, ethernet, wireless connectivity • 120-sheet input,[1] automatic duplexing • Lowest vendor-specified ink cost per page: 3.3 cents black, 9.2 cents for all four colors
	▸ Home users with light printing needs will like everything about this MFP except its lackluster quality on plain paper.			
5	Epson WorkForce 635 $200 NEW find.pcworld.com/71712	★★★½☆ VERY GOOD	• Text quality: Fair • Graphics quality: Very Good • Tested speed: 7.3 ppm text/ 3.0 ppm graphics	• USB, ethernet, wireless connectivity • 250-sheet input, automatic duplexing • Lowest vendor-specified ink cost per page: 3.0 cents black, 10.2 cents for all four colors
	▸ Small office users get perks aplenty with this Epson unit: speedy text printing, automatic duplexing, and budget-friendly inks.			
6	Epson Artisan 835 $300 find.pcworld.com/70514	★★★½☆ VERY GOOD	• Text quality: Fair • Graphics quality: Very Good • Tested speed: 7.3 ppm text/ 3.0 ppm graphics	• USB, ethernet, wireless connectivity • 120-sheet input,[1] automatic duplexing • Lowest vendor-specified ink cost per page: 3.3 cents black, 9.2 cents for all four colors
	▸ The Artisan 835 is an appealing higher-end home MFP, but plain text and photo prints on plain paper looked washed-out and grainy.			
7	Canon Pixma MX882 $200 NEW find.pcworld.com/71713	★★★½☆ VERY GOOD	• Text quality: Very Good • Graphics quality: Very Good • Tested speed: 6.4 ppm text/ 1.8 ppm graphics	• USB, ethernet, wireless connectivity • Two 150-sheet inputs, automatic duplexing • Lowest vendor-specified ink cost per page: 4.7 cents black, 12.9 cents for all four colors
	▸ You needn't sacrifice performance for style: This MFP delivers full print/copy/scan/fax features in a shiny black package.			
8	HP Photosmart Premium e-All-in-One C310a $580 find.pcworld.com/71157	★★★½☆ VERY GOOD	• Text quality: Very Good • Graphics quality: Good • Tested speed: 9.3 ppm text/ 3.1 ppm graphics	• USB, wireless connectivity • 125-sheet input,[1] automatic duplexing • Lowest vendor-specified ink cost per page: 4.4 cents black, 11.6 cents for all four colors
	▸ Photo enthusiasts will appreciate the unit's easy touchscreen interface, fast print speeds, and dedicated photo tray.			
9	Kodak ESP 9250 $250 find.pcworld.com/70860	★★★½☆ VERY GOOD	• Text quality: Very Good • Graphics quality: Good • Tested speed: 4.6 ppm text/ 1.8 ppm graphics	• USB, ethernet, wireless connectivity • 100-sheet input,[2] automatic duplexing • Lowest vendor-specified ink cost per page: 2.2 cents black, 6.6 cents for all four colors
	▸ Speed and print quality vary on the ESP 9250, but some users may find that its low ink costs are worth the inconsistency.			
10	Lexmark Pinnacle Pro901 $300 find.pcworld.com/70031	★★★½☆ VERY GOOD	• Text quality: Very Good • Graphics quality: Good • Tested speed: 6.3 ppm text/ 1.8 ppm graphics	• USB, ethernet, wireless connectivity • 150-sheet input, automatic duplexing • Lowest vendor-specified ink cost per page: 1.0 cent black, 10.0 cents for all four colors
	▸ You pay more for the machine but less for its ink—a reasonable trade-off when you consider the plentiful features Lexmark includes.			

CHART NOTES: Rankings are as of 4/1/11. ppm = pages per minute. FOOTNOTES: [1]Plus a dedicated 20-sheet photo-paper tray. [2]Plus a dedicated 40-sheet photo-paper tray.

MORE ONLINE Visit find.pcworld.com/62965 to see in-depth reviews, full test results, and detailed specs for each inkjet MFP on this chart.

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- Nvidia® GeForce™ GTX 560 Ti 1GB Video Card - DirectX 11 Support
- 24X DVD+/-RW Drive
- 1TB SATA-II 7200RPM HDD
- 120mm Radiator Liquid CPU Cooling System

- Corsair Memory 6GB DDR3-1333
- NZXT® Guardian 921RB Gaming Case + 700W Certified Power Supply
- iBUYPOWER Premium Keyboard, Mouse & Speakers
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Boxee Box by D-Link: Stylish Media Streaming

THE NONCUBICAL Boxee Box.

FIRMWARE UPDATES since its initial release have helped D-Link's Boxee Box ($199) become the first-rate media streamer it should have been last fall. Though my test unit had some glitches in streaming 1080p content, it's now the most full-featured, user-friendly set-top box around.

Four features distinguish this streamer from the competition: an impressive range of Web video offerings, both free and paid; support for 1080p video, which remains unusual in a set-top box; a slick, videocentric user interface; and an attractive industrial design that includes, besides the box itself, a petite, candy-bar-style remote with a keyboard on one side (to facilitate data entry) and a couple of simple navigation buttons on the other.

The update has improved the Boxee Box's overall Web performance, and the unit now delivers the Netflix and Vudu high-def on-demand commercial services promised (but not present) in the original version.

Boxee largely eliminates the geek factor you see in many set-top boxes, mainly through its use of attractive graphics. But better documentation would have helped me become familiar with the unit's many settings (including some calibration tools not typically seen in set-top boxes).

Overall, the Boxee Box is a great addition to a connected home. I like the remote (though a backlight would have been nice for the keyboard side), and the interface is one of the best I've seen.

—Yardena Arar

★★★★ VERY GOOD

Boxee Box by D-Link | Boxee

Updated firmware belatedly makes this a great set-top box.

List: $199

find.pcworld.com/71779

Netgear's Solid Streamer Weak on TV Services

THE NEOTV supports Netgear's optional USB Wi-Fi adapter.

THE $170 NETGEAR NeoTV NTV550 can find and play most media anywhere on your home network, and stream it to your HDTV in any resolution from standard definition to 1080p high definition. It supports many media formats, including some copy-protected schemes that other streamers can't play, and it streams music, video, and photos from a few Websites, most notably YouTube.

But the lack of integrated Wi-Fi and the unit's inability to handle major commercial movie and TV services such as Amazon, Hulu, Netflix, and Vudu are major drawbacks.

For high-def content, you must connect the NeoTV with an HDMI or component cable, but Netgear provides only a composite video cable and an ethernet cable to connect the unit's 10/100 ethernet port to your home network.

The full-size remote has a complete set of video and audio playback controls, a numeric keypad, a navigation wheel, quick access to settings such as video mode or media type, and extras such as a time-seek button.

Netgear offers many playback settings, including some transition effects for slide-shows. It also offers Blu-ray options in case you happen to have a Blu-ray drive to connect directly to the NeoTV.

Aside from YouTube, the NeoTV's Internet media list at this writing includes Flickr, RadioIO/Shoutcast, and RadioTime (in beta), plus content from various news sites, and weather maps.

Overall, the NeoTV NTV550 is a first-rate media streamer, but only for content on your own network and for YouTube videos. Without support for popular commercial movie and TV services, it faces a tough fight against competitors that deliver content from Netflix, Vudu, and the like.

—Yardena Arar

★★★½ VERY GOOD

NeoTV NTV550 | Netgear

Strong, high-def media streamer lacks Internet media support.

Street: $170

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Since it's automated, the suite can report errors and restart failed tests without user input. It then records the results, including the final WorldBench 6 score as well as the individual results of each application's workload, in both text and graphs.

Refined over the past decade, WorldBench is currently used in over 30 countries by Fortune 500 corporations, government agencies, and international media outlets.

Visit www.worldbench.com today and secure your DVD of WorldBench 6.

Utility Boosts CCleaner

IF YOU LIKE CCleaner, you'll be a fan of free/donationware CCEnhancer too. As the name says, it enhances CCleaner's considerable capabilities.

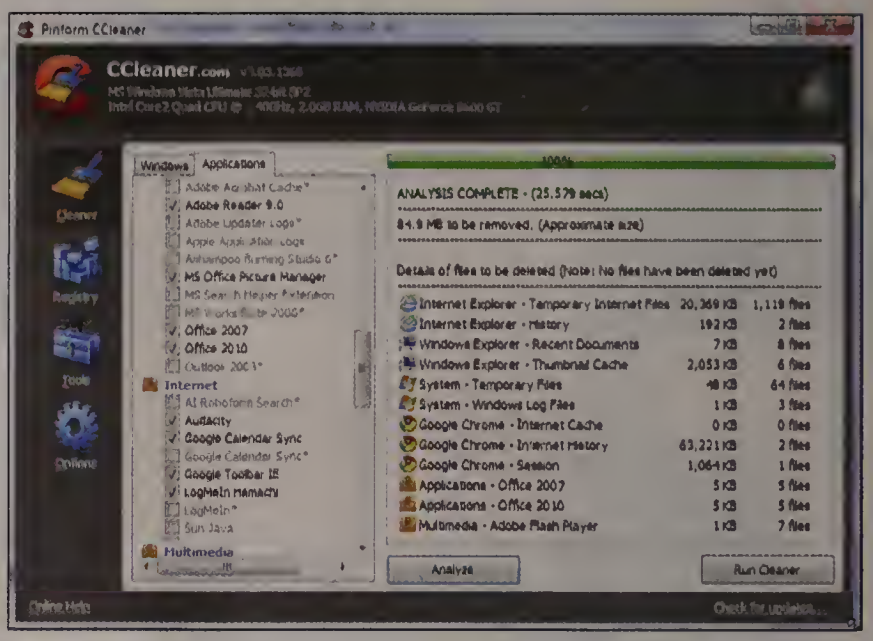
CCleaner deletes unneeded files, erases your browsing tracks, kills unwanted cookies, and removes superfluous files associated with various programs, including all popular browsers, Adobe Acrobat, and Microsoft Office. It also comes with a startup monitor, an uninstaller, and other useful tools.

CCEnhancer integrates smoothly into CCleaner and enables it to eradicate traces of dozens of applications that CCleaner normally can't handle, including Microsoft Works, LogMeIn, and Ashampoo Burning Studio. CCEnhancer puts asterisks next to all programs in the CCleaner list that it enables that program to deal with. Check the box next to any program whose traces you want removed, and CCleaner will do the job, along with taking care of the programs it normally cleans.

During the installation process, you'll almost certainly receive a notification that the most recent rules have not been downloaded, so be sure to click *Download Latest*.

For people who use CCleaner, CCEnhancer offers more cleaning with no more effort.

—Preston Gralla



CCENHANCER CAN clean up after apps that CCleaner can't handle.

★★★½☆ VERY GOOD

CCEnhancer | The Web Atom

Free download helps CCleaner muck out even more programs.

Free

find.pcworld.com/71777

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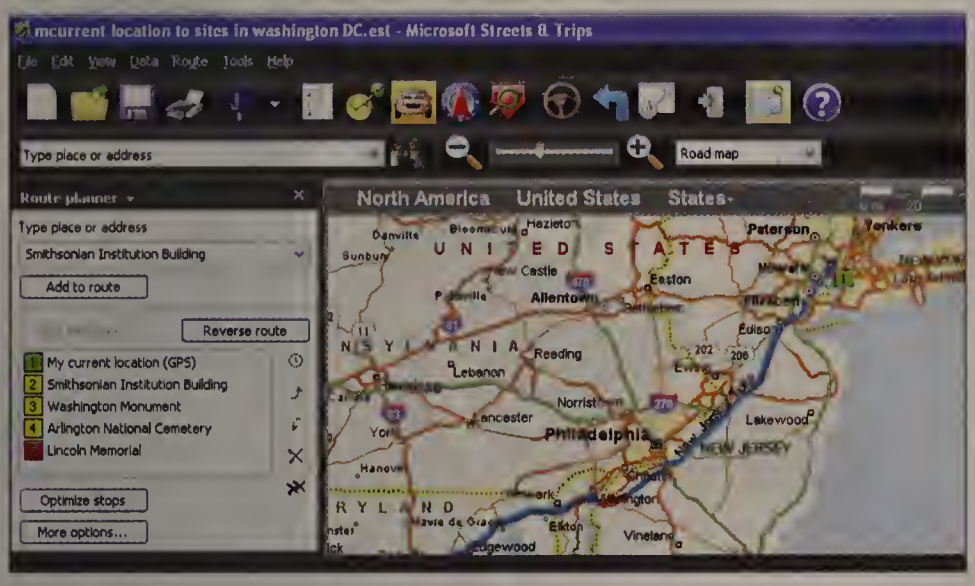
New Maps Plus Multiple-Destination Trip Planning

UPDATED MAPS ARE the only new feature of Microsoft Streets and Trips 2011 ($40). Microsoft claims to have added coverage of 88,000 more miles of navigable roads. Beyond that, the user interface and navigation experience from S&T 2010 remain virtually unchanged.



THE STREETS AND Trips 2011 database includes 1.9 million points of interest.

Streets and Trips lets you plan your trip entirely from a laptop. Coupled with a USB GPS receiver, it can provide turn-by-turn voice-prompted directions.

For itineraries with multiple destinations, Streets and Trips 2011 can optimize the order of the stops. The turn-by-turn list of directions provides time and distance estimates for each directed turn. You can schedule rest stops, estimate the cost of your trip, and schedule refueling stops. Online, you can update maps with road construction info.

—Craig Ellison

★★½☆☆ **FAIR**

Streets and Trips 2011
Microsoft

Convenient trip planning, but this is essentially a map upgrade.

List: $40

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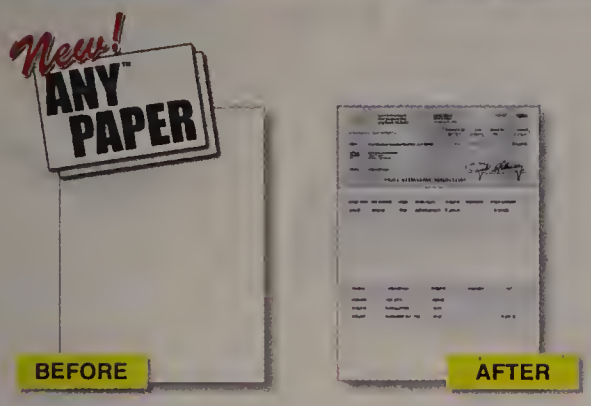

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Secure Your Life in 12 Steps

Learn how to lock down your computer, your home network, your identity—even your phone.»

BY NICK MEDIATI
ILLUSTRATION BY JOE ZEFF DESIGN

Good security advice can be hard to find. Lots of security experts offer help, but not all of their tips are accurate or up-to-date, and many address PC security only. So even if you follow their advice, you may be more vulnerable than you think. That's where we come in. We've assembled a dozen simple but essential tips—a 12-step security program—to keep your PC, smartphone, gadgets, and identity safe. The steps are practical and fairly easy to perform, so you can strengthen your security without losing your mind in the process.

1 Use Virtual Credit Card Numbers to Shop Online

You have good reason to be nervous when using your credit card number to shop online. After all, you may know little or nothing about the company you're buying from, and your credit card information is at risk of being compromised in a data breach. Using a virtual credit card number is one way to make your Internet shopping excursions more secure.

Essentially a wrapper for your regular credit card or debit card account, a virtual card number is good for one use only. When you use the virtual number, the bank that supplied it charges your purchase to your regular credit or debit card, but hackers never gain access to the underlying credit card information.

Various financial institutions maintain some sort of virtual credit card program. Bank of America, for instance, offers a ShopSafe service (find.pcworld.com/71721), and Discover has a similar service (find.pcworld.com/71722). Check with your bank or card issuer to see what options are available. Alternatively, consider Shop Shield (shopshield.net), a virtual card number service that you can use with any credit card or checking account.

LACIE'S RUGGED SAFE hard drive has a fingerprint reader that you can use to unlock your data securely.

2 Secure Your Wi-Fi

Is your Wi-Fi network at home password-protected? If not, it should be. You might not care if your neighbors use your Wi-Fi connection to surf the Web, but someone with more sinister motives could take advantage of your generosity (and lack of protection) to gain access to data stored on your home PCs.

The easiest way to guard against Wi-Fi interlopers is to encrypt your Wi-Fi network. Afterward you'll have to enter a password whenever you connect to your Wi-Fi network, but that's a small price to pay for improved security. Most Wi-Fi routers support WEP, WPA, and WPA2 encryption standards. Be sure to use either the WPA or WPA2 encryption settings, which provide a much higher level of security than WEP encryption.

Another safeguard is to set your router not to broadcast the SSID (your network's name). With SSID broadcasting disabled, your wireless network won't be visible to computers nearby, and only people who specifically know your network's name will be able to find it.

The procedure for locking down your Wi-Fi will vary depending on your router's model and manufacturer. Check the router's documentation for instructions.

3 Encrypt Your Hard Drives

Hard drives and USB flash drives are treasure troves of personal data. They're also among the most common sources of data leaks. If you lose a flash drive, external hard drive, or laptop containing sensitive personal information, you will be at risk. Fortunately, encrypting your hard drive can give your data an extra layer of protection beyond setting up a system password. Encryption will conceal your drive's data and make accessing the files almost impossible for anyone who does not know your encryption password.

The Ultimate and Business editions of Windows 7 and Vista come with BitLocker, a tool that lets you encrypt your entire hard drive. If you don't have the Ultimate or Business version, another alternative is to use TrueCrypt (truecrypt.org), a free, open-source tool that can encrypt your entire disk, a portion of a disk, or an external drive. For its part, Mac OS X includes FileVault, a tool for encrypting your Mac's home folder; Lion, the next major Mac OS X release on the horizon, will be able to encrypt a whole hard drive.

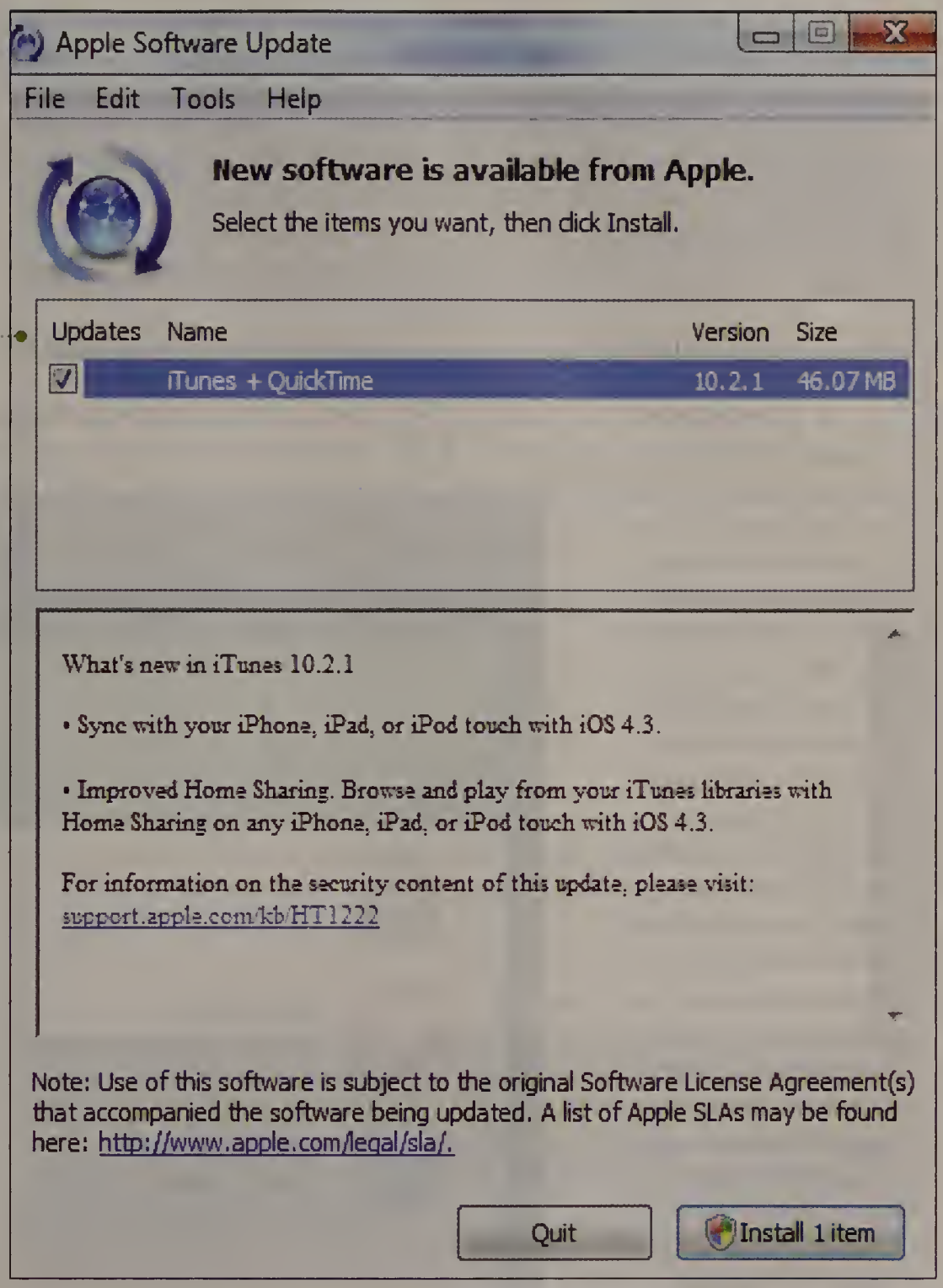
Another option is to buy external hard drives and flash drives equipped with encryption tools. Some of these drives have built-in fingerprint readers for additional security. See find.pcworld.com/71733 for more about secure flash-drive options.

4 Keep Your Software Up-to-Date

One of the simplest but most important security precautions you should take is to keep your PC's software up-to-date. I'm not talking exclusively about Windows here: Adobe, Apple, Mozilla, and other software makers periodically release fixes for various bugs and security flaws. Cybercriminals commonly exploit known vulnerabilities, and Adobe Reader is a constant target of such assaults.

Not infrequently, the latest version of a popular program introduces entirely new security features. For example, Adobe Reader X, the newest version of the company's PDF reader, uses something called Protected Mode to shut down malware attacks. If you still use an earlier version of Adobe Reader, you aren't benefiting from Reader X's security enhancements.

Most major commercial software packages come with some sort of automatic updating feature that will inform you when a new update is available. Don't ignore these messages; install updates as soon as you can when you're prompted to do so. It's a little bit of a hassle, but it can prevent major headaches later on.



SURE, REGULARLY UPDATING your computer's software is a pain, but installing updates can go a long way toward keeping your PC safe.

5 Upgrade to the Latest Antivirus Software

If you're running antivirus software from two or three years ago, you should upgrade to the most recent version, even if you still receive up-to-date malware signature files for the older edition. The underlying technology for antivirus software has improved significantly in recent years.

To detect threats, antivirus products today don't rely solely on the traditional signature files (regularly updated files that identify the latest malware). They also use heuristic techniques to detect and block infections that no one has seen yet. Given how frequently new viruses crop up in the wild, the ability to protect against unknown malware is critical. »

Not sure what to use? Consult our latest reviews of antivirus software (find.pcworld.com/71735) and security suites (find.pcworld.com/71736). And you don't even have to spend money to protect yourself, thanks to various free antivirus options (find.pcworld.com/71734).

6 Lock Down Your Smartphone

If you use your smartphone the way I use mine, your handset probably contains lots of personal information—e-mail addresses, photos, phone contacts, Facebook and Twitter apps, and the like. That accumulation of valuable data makes smartphones a tempting target for thieves and cybercriminals, which is why the smartphone is shaping up as the next big security battleground.

Android phones are already being hit with Trojan horses and other types of malware, and security experts agree that mobile malware is still in its infancy. Worse, many users don't think of their phones as computers (though that's what the devices are), so they don't take the same security precautions they would with a PC. If you haven't downloaded a security app for your Android phone, you should. Most smartphone security apps are free, and it's far better to have one and never need it than to get caught off-guard and exposed without one.

If you have an Android phone, the first app you should install on it is an antivirus program. Besides scanning for malware, mobile antivirus apps may support such features as a remote wipe (so you can securely remove all data stored on the phone if you lose it), GPS tracking (for locating your phone if you misplace it), and SMS spam blocking.

Our favorite freebie in this category is the Lookout Mobile Security app (find.pcworld.com/71740). Lookout scans your phone for existing malware threats and automatically scans any new applications you install on your handset. Other popular antivirus apps, available for a subscription fee, are Symantec's Norton Mobile Security (beta version, find.pcworld.com/71741), AVG's Antivirus Pro (find.pcworld.com/71742), and McAfee's WaveSecure (find.pcworld.com/71743).

Because Apple's App Store takes a more restrictive approach to apps offered for sale there, iPhone owners generally don't have to worry as much about malware, though it's always possible for something to slip through the cracks. Apple hasn't allowed any proper antivirus applications into the App Store, either, but you do have some security options.

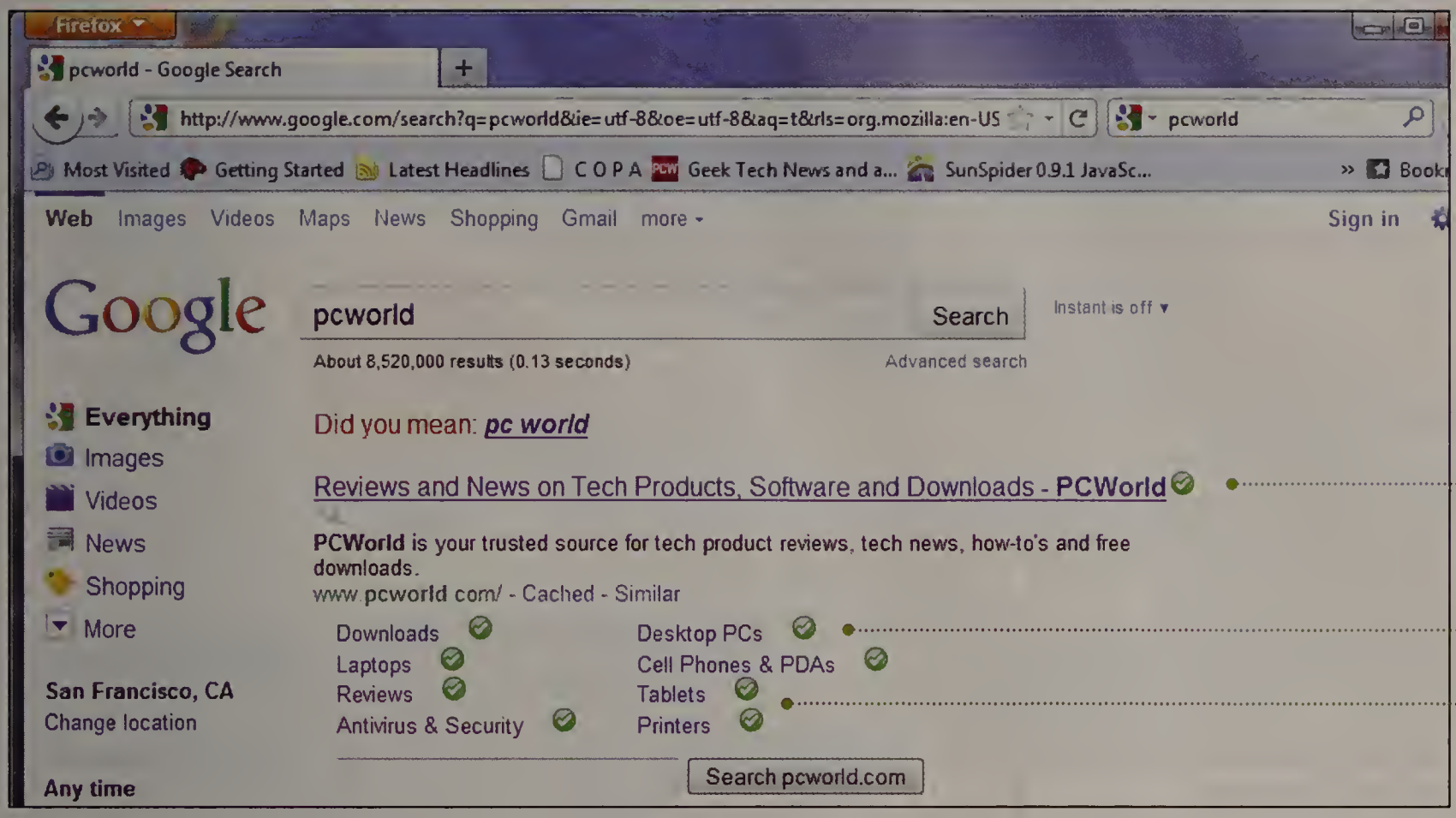
One is a device tracking and remote-wipe service from Apple called Find My iPhone. It comes as part of Apple's paid MobileMe service ($99 per year; www.apple.com/mobileme), but Apple also offers it to any iPhone, iPad, or iPod Touch owner, free of charge. With Find My iPhone, you can lock and remotely delete data stored on your iPhone, track the device via GPS, remotely set a passcode, and display an on-screen message with an alarm sound (so you can find it if you misplace it around your house or office).

One more tip: When choosing a mobile antivirus program, it's safest to stick with well-known brands. Otherwise, you risk getting infected by malware disguised as an antivirus app.

APPS LIKE LOOKOUT Mobile Security provide basic security tools for your smartphone.

7 Install a Link-Checker Plug-In

Security threats may lurk in seemingly innocuous Web pages. Legitimate sites may get hacked, cybercriminals game search engines to make sure that their infected pages come up in searches for hot topics (a technique known as "search engine poisoning"), and seemingly safe sites may harbor malware. Although you have no way to guard against these attacks completely, using a link checker can help protect you from many of them.



Link-checker tools typically show small badges next to links in search results and elsewhere to indicate whether a site is trustworthy, dangerous, or questionable. Many such tools also add a status indicator to your browser's toolbar to signal the presence of any problems with the site that you're currently visiting.

Various options are available: AVG LinkScanner (linkscanner.avg.com), McAfee SiteAdvisor (siteadvisor.com), Symantec Norton Safe Web Lite (safeweb.norton.com/lite), and Web of Trust (mywot.com) are all available for free. Many security suites come with a link scanner, too.

THE FREE MCAFEE SiteAdvisor utility lets you know whether a particular search result link is safe to click, or whether a hidden danger lurks behind it.

8 Don't Neglect Physical Security

A thief can snatch an unattended laptop from a desk and walk away in a matter of seconds. And a thief who has your laptop may have access to your files and personal information. A notebook lock won't prevent someone from cutting the cable, but it can deter crimes of opportunity.

Kensington is probably best-known for its notebook locks; it offers an array of locks for laptops and desktops (find.pcworld.com/71723). Targus is a second vendor that specializes in laptop security gear (find.pcworld.com/71724), including one lock that sounds an alarm when someone tries to pick up the attached laptop or cut the lock cable.

Prying eyes are a common security hazard. To prevent unauthorized viewing of your data when you step away from your desk, always lock your screen before leaving your PC unattended. To do this, simply hold down the **<Windows>** key and type the letter **L**. This will bring up the lock screen. To get back to work, press **<Ctrl>-<Alt>-<Delete>**, and enter your login password at the prompt.

Another way to shield your screen is to install a privacy filter over the display. These filters fit directly on a monitor so other people can't peer over your shoulder and see what's on the screen. A privacy filter may be particularly useful if you work in an "open" office that lacks cubicle walls. Various companies sell these filters, including Targus (find.pcworld.com/71725), 3M (find.pcworld.com/71726), and Fellowes (find.pcworld.com/71727).

9 HTTPS Is Your Friend

When you're browsing the Web, protect yourself by using HTTPS (Hypertext Transfer Protocol Secure) whenever possible. HTTPS encrypts the connection between your PC and the Website you're visiting. Though HTTPS doesn't guarantee that a site is secure, it can help prevent other parties from hacking into the network and gaining access to your account.

Many sites use HTTPS by default: When you purchase an item online or log in to online banking, for instance, your browser will probably connect to the »

site via HTTPS automatically. But you can go one step further by enabling HTTPS on Facebook, Twitter, and Gmail.

To use Facebook's HTTPS feature, log in to Facebook and click *Account* in the upper-right corner. Select *Account Settings* from the drop-down menu, and look for 'Account Security' on the resulting page. Under the Account Security heading, click *Change*, check the box next to *Browse Facebook on a secure connection (https) whenever possible*, and click *Save*.

For Twitter, first log in to your account. If you're using the new Twitter interface, click your account name in the upper-right part of the screen, and select *settings*. (If you're still using the old Twitter interface, click the *Settings* link in the upper right of the window.) From there, scroll down to the bottom of the resulting page, check the box next to *Always use HTTPS*, and click *Save*.

To enable HTTPS on Gmail, log in to your account, click the gear icon in the upper-right corner, and select *Mail Settings* from the drop-down menu. Next, under the Browser Connection heading, select the button labeled *Always use https*. When you're all set, scroll to the bottom of the page and click *Save Changes*. To learn more about Gmail security, visit find.pcworld.com/71737.

USING A LAPTOP lock is an uncomplicated way to avoid having your hardware stolen—and it can keep your data from falling into the wrong hands.

10 Avoid Public Computers and Wi-Fi

As convenient as free Wi-Fi and publicly available computers may be at, say, a public library or café, using them can leave you and your personal information exposed. Public computers might be infected with spyware and other types of malware designed to track your movements online and harvest your passwords.

The same is true of open Wi-Fi networks. Cyberthieves may set up rogue Wi-Fi networks that look legitimate (for instance, one may be named for the café that you're visiting) but enable the crooks to collect your personal information. Even legitimate open Wi-Fi networks may leave you vulnerable. For an example, look no further than the Firesheep plug-in for Firefox (find.pcworld.com/71730), which allows just about anyone to hijack log-in sessions for various social networks.

Sometimes, you may have no choice but to use a public computer or Wi-Fi network. When you do, don't use it to check your e-mail or social network accounts, conduct online banking, or perform any other action that entails logging in to a site. If you have access to a VPN, use it.

11 Be Password Smart

You probably know already that using obvious or easy-to-discover passwords like "password" or your pet's name is a »

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bad idea. But how can you make your passwords significantly more secure?

First, you need to use a different long, strong password for each account. Hackers often attempt to break into accounts by employing a "dictionary attack," which involves using words straight from the dictionary to guess your password. So don't use standard words as your passwords; instead, try creating them from a combination of letters, numbers, and symbols. And don't simply replace letters in a word with a symbol (for example, using the @ symbol in place of an *A*); it's too common a trick. You can also strengthen your passwords by using a mix of lowercase and capital letters.

Basically, the more complex a password is, the better. But try to use something that you'll be able to remember—a mnemonic of some sort that incorporates various alphanumeric symbols—and that nobody but you would know.

Remembering multiple passwords can be a challenge, which is why many people find that a good password manager is indispensable. Keepass (keepass.info/) is a good, free password-management option that works on Windows and Mac OS X systems. Another possibility is 1Password ($40, find.pcworld.com/71731), which can generate and manage passwords for you.

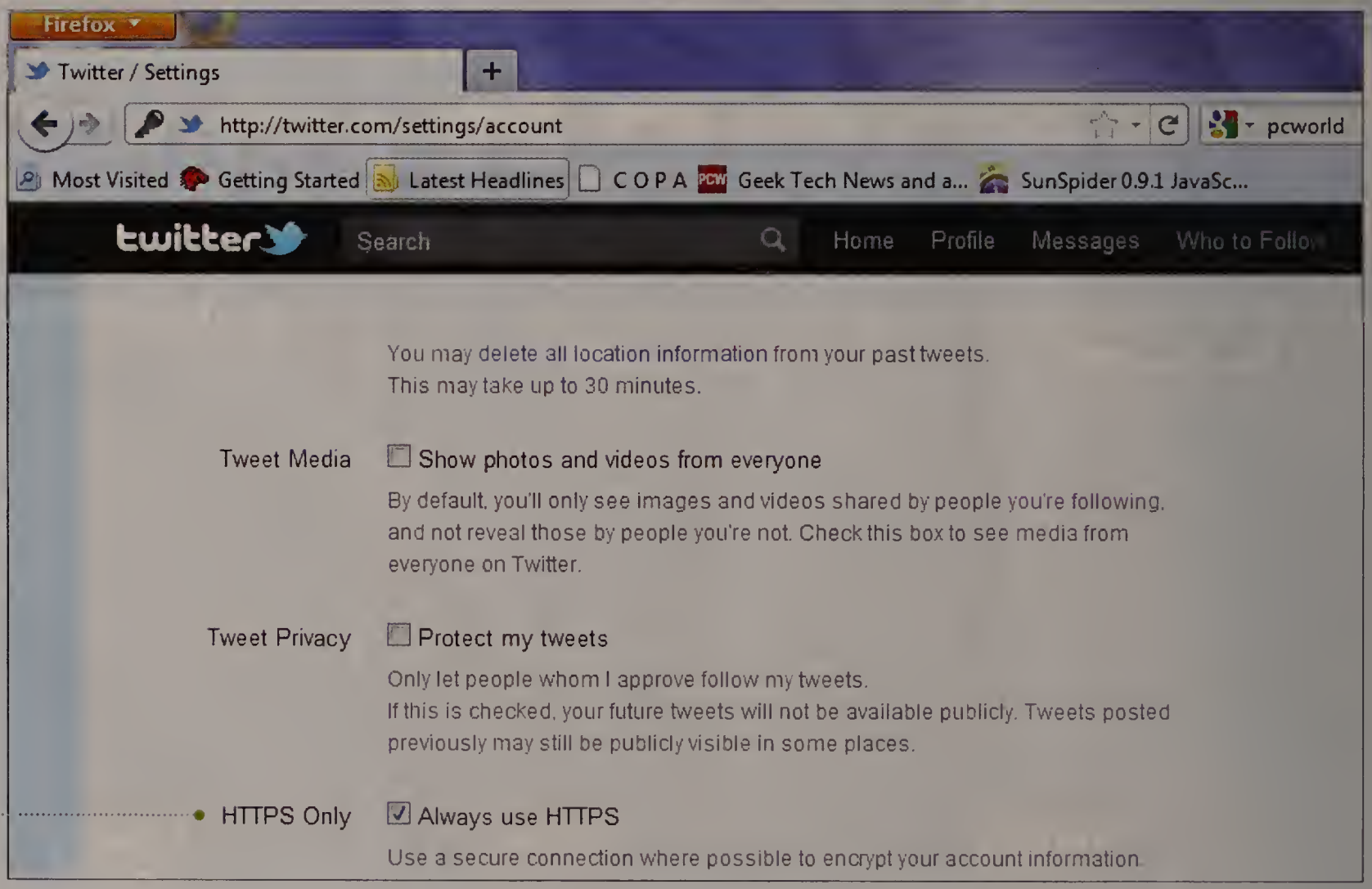
12 Check Your Credit Report Each Year

Unfortunately, even if you do everything right, bad guys might still succeed in stealing your identity. After all, you can control who has access to your personal information, but you can't control how well a company that you do business with secures its personal-data records.

Nevertheless, you can limit the damage that would result from undetected identity theft by checking your credit report regularly. Periodically checking your credit report is a good way to make sure that no one has opened credit card or bank accounts under your name.

If you are a U.S. citizen, you're entitled to receive one free credit report every 12 months from each of the three major credit agencies—Equifax, Experian, and TransUnion—via Annualcreditreport.com. The service will let you examine and print out your credit report for free, but if you want to obtain your actual credit score, you'll have to pay for it. Since your freebie credit report is just a once-a-year affair, it's a good idea to insert a reminder in your calendar to check in again with Annualcreditreport.com in 12 months. ●

YOU CAN EASILY enable HTTPS on sites such as Twitter and Facebook and on services such as Gmail to introduce an extra level of security.



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FROM LEFT TO RIGHT: the Motorola Xoom, LG Slate, and Apple iPad 2.

Which Tablet Is Best for You?

See what the BlackBerry PlayBook, HP TouchPad, Motorola Xoom, and Samsung Galaxy Tab have that Apple's iPad doesn't. »

BY MELISSA J. PERENSON
PHOTOGRAPH BY ROBERT CARDIN

Apple's iPad 2 is a best-seller. But is it the best tablet?

To find out, I spent a few weeks testing some of its competitors. I learned that in a surprising number of areas, other tablets actually beat out the iPad.

For this comparison, I set aside the hardware specs. What makes or breaks a tablet is its operating system, which determines whether watching video, composing e-mail, and surfing the Web will be a pleasure or a frustration.

While most tablet OSs come on only one brand of tablet each, Google's Android 3.0 is the choice of a growing number of slate manufacturers. For this article I tried the iOS 4.3–based Apple iPad 2, the BlackBerry Tablet OS–based RIM BlackBerry PlayBook, and the Android 3.0–based Acer Iconia Tab A500, Motorola Xoom, and T-Mobile G-Slate. I didn't have a final version of the WebOS-based HP TouchPad (due out this summer) for unlimited testing, but I was able to spend some time with a preproduction unit.

A Tale of Two Home Screens: Android 3.0 has widgets for search, Web bookmarks, and Google Books (captured here in midflip). iOS 4.3 has a static presentation.

Home Screen

advantage:
BlackBerry Tablet OS, Android 3.0

The elegantly simple BlackBerry Tablet OS home screen smoothly transitions as you swipe among open apps in the navigator pane, which occupies two-thirds of the screen. RIM built gesture navigation into the PlayBook's bezel: A swipe up shows context-sensitive menus, while a swipe down reveals the full app screen. BlackBerry also allows one-tap access to Bluetooth, Wi-Fi, battery, and general-settings info. Notifications are subtle, appearing in the upper right.

Android 3.0's six home screens offer detailed control over organization and presentation. The design is clean, allowing you to move icons and widgets across the screens easily. Widgets put regularly refreshed information—such as your calendar, your recent e-mail, or the latest weather—directly on the screen. Tap a widget, and you go to the related app. These shortcuts are finger friendly, but the frequently winking updates could become more clutter than convenience.

Android has back, home, and recent-apps buttons at the lower left; the status bar is at the lower right. Both sets of but-

tons are built into the display, and will rotate accordingly as you turn the tablet. The back button doesn't behave as you might expect: Using it causes you to exit an app entirely. The button for recently accessed apps, often erroneously called the multitasking button, pulls up thumbnails of the five apps you've used lately; but even though this is intended as a shortcut, it can make your finger travel more, not less, to return to an app.

I like Android's redesigned status-bar notifications, which you reveal with a tap. You also get easier access to oft-used settings such as airplane mode and Wi-Fi (see the screenshot on page 74).

Apple's iOS home screen is staid and consistent, not at all dynamic. The bottom area holds up to six docked apps; the rest of your apps spread across one of the multiple (up to 11) home screens. App icons are static, and unlike Android 3.0, iOS doesn't support widgets. Notifications have no set location, appearing in intrusive pop-up boxes. Organizing apps on different screens or in folders is tiresome, whether on the iPad or in the iTunes desktop software. And iOS buries oft-used settings in the layers of the settings menu; you'll find no shortcut here.

Like HP's WebOS phones, the TouchPad uses "activity cards" to represent apps, media files, e-mail, or browser windows. Cards can sit alone or in a stack. I like the flexibility of breaking out cards, as well as stacking related cards, even if the sources are different apps. And I like the notifications in the upper right (tap an icon, and you can flick through alerts). WebOS also has one of the best approaches to accessing settings that I've seen.

Mail

advantage: Android 3.0

For mail, Android barely gets the nod over iOS. Its versatile, triple-pane approach to e-mail is simple to navigate. (If you don't use Gmail, though, you have to work with the generic e-mail app, which does not let you search messages. At least you can easily organize them into folders.) More important, the behavior of Android's mail screens isn't dramatically different in the vertical versus the horizontal position.

Although Apple's Mail app looks good and is easy to use, its behavior is annoyingly different based on how you hold the iPad. In landscape orientation it shows two panes, while in portrait mode it has a pop-up pane for moving through messages and inboxes. And iOS puts more limitations than Android does on downloads: It saves JPEGs, PDFs, and Microsoft Office files, but you can open them only in apps written to hook into the Mail app (for example, Pages, iBooks, or Evernote). You can't attach a file directly to a message, either; to send a photo, for example, you have to initiate the message from the image in the Photo Roll, not the e-mail app.

BlackBerry Tablet OS stumbles in its lack of an e-mail app. The BlackBerry Bridge feature allows you to pair a BlackBerry phone with the PlayBook, so you can view the phone's Messenger e-mail, contacts, and chats on the tablet. But when you decouple the two devices, the Messenger data disappears from the PlayBook—a feature that should appeal to corporate IT honchos who want to limit the spread of sensitive data.

The PlayBook has icons for AOL Mail, Gmail, Hotmail, and Yahoo Mail, but they are merely shortcuts to those services in the Web browser. In my tests, I couldn't add an attachment in Gmail, though I could—with graphics issues—in AOL Mail. I could save attachments from Web e-mail, but finding the files again was difficult, and sometimes they didn't open.

WebOS's e-mail is similar to Android 3.0 in that it has a multipane organization. A message can't occupy its own activity card unless you press, say, the reply or forward button; once it does stand on its own, you can stack it with a Web page to create a hub of related content. You can save one or all attachments, »

HARDWARE OPTIONS

Galaxy Tab

Samsung's Galaxy Tab 10.1 Android 3.0 slate is 0.2mm thinner than the iPad 2. This 10.1-inch model, due in June, costs $499 for a 16GB Wi-Fi unit (an 8.9-inch one is coming too). I like its thinness—and many of its interface tweaks.

PlayBook

RIM's BlackBerry PlayBook gets a lot right, but it also feels like a work in progress. For now it's constrained by a limited app selection, software glitches, and choices in functionality or design that might reduce the tablet's popularity among consumers.

Azpen has USB 2.0 and mini-VGA ports on its Windows/Android X1 tablet.

Viewsonic's ViewPad 10 runs Win 7 and Android 1.6.

What About Windows?

WE'VE SEEN LITTLE movement when it comes to putting Windows on a tablet—and it may not happen in earnest until we see Windows 8 (see page 15). For now, Dell, Fujitsu, and MSI have said that they would aim Windows 7 tablets at the education, finance, manufacturing, and medical markets. So far only Asus, Azpen, and ViewSonic have suggested that their Windows tablets are for a wider audience.

Neither the default Windows interface nor the applications are finger friendly, and battery life is an issue. But the appeal of Windows on a tablet remains, as much for its novelty as for its interoperability with the software on a laptop or desktop.

The longer Microsoft waits on providing tablet optimization, the more ground it will cede as tablets steal the thunder from traditional PCs and consumers come to rely on mobile OSs instead of on Windows.

or open an attachment, but I didn't see enough of the TouchPad's apps to determine how attachments interact with them.

Web

advantage: Android 3.0

The clear edge in Web browsing goes to Android. Its native browser's tabbed interface makes navigating multiple pages remarkably easy, and content updates continuously as long as you're shifting among tabs, not apps. The visual bookmark design—with thumbnails of pages—helps you quickly access favorites. I appreciate the support for Adobe Flash Player 10.2, as well. Another benefit of Android: You can download other browsers, such as Mozilla's Firefox 4 for Mobile.

iOS 4.3 and BlackBerry Tablet OS feel stuck in the dark ages in comparison. In their respective native Web browsers, you must exit one page before you browse to another. Switching among pages is not as fast and smooth as in Android's tabbed design, and neither of these OSs updates the contents of a page dynamically.

iOS's mobile Safari limits how many windows you can open at once, and shows bookmarks as a mere text list. In addition, as with e-mail, iOS restricts how the Web browser handles downloads. You don't download files, per se; instead, if a supported file (for example, a Word doc or a PDF) is on a page, that file will open in a separate browser window. From there, you'll have the option to open the file in an app that has been hooked into the Web browser, such as Apple's iWork apps, Dropbox, iBooks, or Photo Roll. But you can't download .zip files, video files, or any file format that iOS does not support.

The BlackBerry browser supports Flash, but its behavior is uneven. It can save a JPEG to a Downloads folder; in my tests, though, I couldn't open the JPEGs I downloaded. Similar issues occurred with some downloaded PDFs and Word docs, while other files saved and opened fine in the PlayBook's preinstalled apps (Adobe Reader and the Microsoft Office–compatible Word To Go, Sheet To Go, and Slideshow To Go). Even stranger, tapping on a file didn't consistently bring up the action to save it, though when I did get the chance to save, the PlayBook also let me rename

the file on the spot. Another frustration: The Download folder did not consistently retain a history of the downloaded files; without that, or a general file browser, the files seemed lost to the ether.

The WebOS browser on the TouchPad works much as it does on WebOS phones. Each browser window behaves as its own activity card, and you can stack those cards together or view them individually.

Multimedia

advantage: none

No mobile OS gets media handling entirely right. Which one you'll consider the best will depend on your shopping habits and on how you plan to use the tablet.

The iPad's tight integration with the iTunes store makes buying new audio and video exceedingly easy. iTunes desktop software remains fairly good at organizing and tracking media, as well as at syncing it to your tablet. However, although you can add your own videos, music, and photos to your PC iTunes library, in order to play them on the iPad you have to perform a sync—you can't just drag and drop.

At the time of my tests, Google had no comparable music or video store for its Android OS (though persistent rumors indicate that it may soon launch Google Music, reportedly a digital storefront). With an Android tablet, you can shop at various stores—for example, the Amazon MP3 app lets you buy music at the Amazon MP3 store and play it in the Amazon Cloud Player, and Samsung offers Media Hub for music and video downloads on its tablets. It's great to have choices, but if you use different stores you could end up with music that you can't play in the same library (Media Hub content plays only in that app, for instance).

Android 3.0 is capable of solid media management—most of the time. Syncing via Windows Media Player is simple; if you prefer to drag and drop music files, that works, too. The same goes for video files (though Android surprisingly lacks support for WMV files, among others). Plus, you get Flash support for online video (note, however, that Hulu generally blocks access from Android devices).

Unfortunately, since Android lacks a dedicated video player, videos are meshed into the Gallery with photos. And the version of Android 3.0 on all the tablets I tried has a major bug: In the Gallery, images look fuzzy. A Google rep told me that the company was aware of the problem, but offered no timeline for a fix. I like how the Gallery lets me view EXIF data, but that information isn't much good if I can't tell whether an image is actually sharp.

Media handling on BlackBerry Tablet OS is a mixed bag. It does some things extraordinarily well: For example, you can output 1080p video via HDMI to a TV and still surf the Web on the PlayBook. In my tests, Flash video played fine in a Web page, though sporadic sizing issues made it hard for the Flash player to fit the PlayBook's screen. I appreciated how smoothly the OS exited and resumed YouTube and other videos while I navigated open apps, and it had no issue playing WMV, AVI, or even .mov files I shot on my iPhone. Photos looked crisp and sharp, but the Pictures app lacks any options for viewing or sharing your photos. I also had difficulty getting vertical images to rotate from the horizontal (though the same images do so just fine on Android 3.0); RIM says this functionality will come in an update.

You can buy music on a PlayBook via 7digital, the same DRM-free store available on BlackBerry phones. RIM's planned video store isn't ready yet. Moving content onto the PlayBook is fairly easy: You have to install an app on your desktop, and use it to transfer files to the device wirelessly or use the app's guided sync and transfer options. Impressively, it grabbed music from my iTunes library, skipping only copy-protected songs. The music player operates well, though its layout took getting used to and building playlists on the fly wasn't as easy as I would like. »

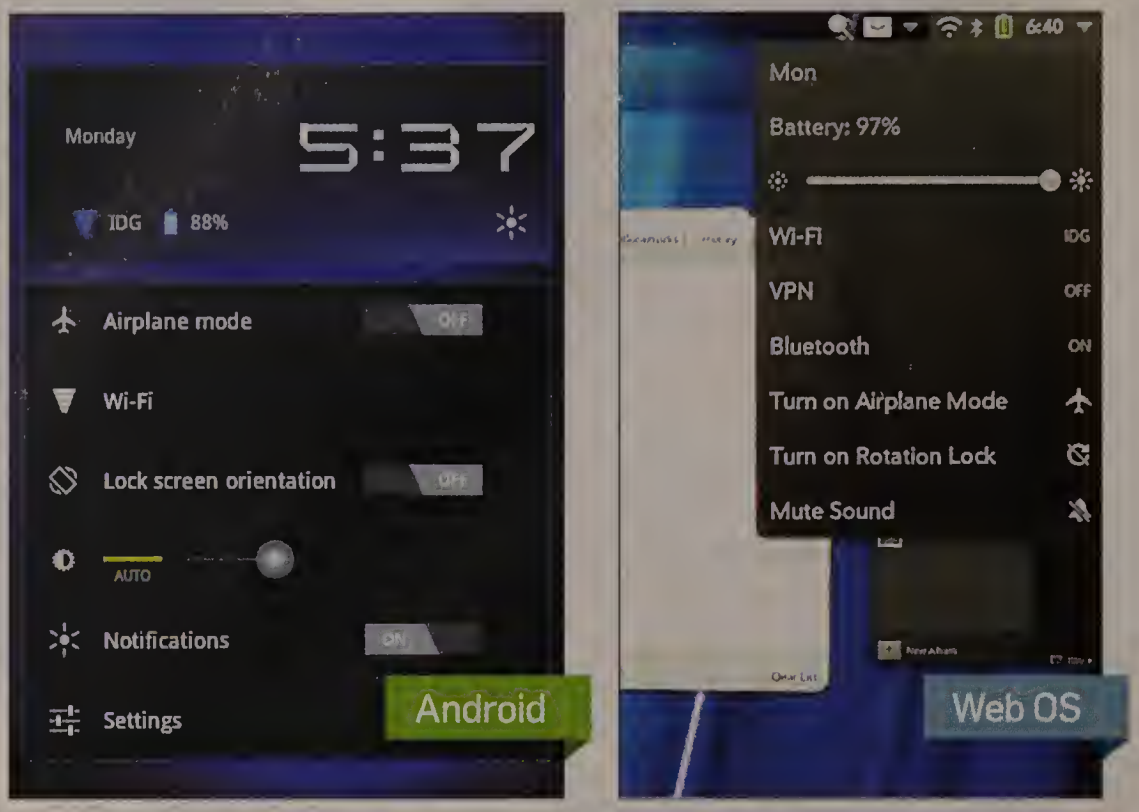
HARDWARE OPTIONS

TouchPad

HP is betting its tablet future on WebOS, which it acquired from Palm last year. The TouchPad has a 9.7-inch display and supports HP Touchstone technology for wireless transfers between WebOS handsets and the tablet.

G-Slate

Also called the LG Optimus-Pad, the 8.9-inch, Android 3.0–based G-Slate tablet for T-Mobile stands out thanks to its two rear cameras. The cameras enable 3D video capture; you can view the videos through the included anaglyph video glasses.



Convenient Settings: Both Android 3.0 and WebOS provide handy, easy-to-use shortcuts to frequently accessed settings directly from the home screen.

Apps

advantage: iOS 4.3

At last count, more than 64,000 of the 350,000 apps in Apple's App Store were optimized for the iPad. No matter what you want to do on your iPad, you'll likely find something that does it in the App Store.

In contrast, only a hundred-plus Android apps are currently optimized for use on Android 3.0 and the larger screens of tablets. How much of the ongoing Android app boom will be devoted to tablets isn't certain, either. And I've had mixed experiences with apps that aren't intended for Android 3.0: Sometimes they work fine, other times they function but look off, and still other times they crash.

RIM says it launched BlackBerry Tablet OS with 3000 apps in its AppWorld store. But none of the apps I tried particularly impressed me—some appeared to be simple, almost DOS-like in their design. RIM also says the PlayBook will be able to run Android 2.*x* apps (not 3.0 apps) sold via AppWorld; however, the Android Player emulator, as well as the emulator that will run BlackBerry phone apps, will not be available until later this summer.

Best Overall

I find a lot to like in all tablet OSs, and I wish I could cobble their appealing elements together into one awesome OS. Barring that, I believe Apple's iOS remains the top tablet OS. This may seem surprising, given that I prefer other OSs for many individual functions. On the whole, however, iOS has the best-formed environment for productivity and entertainment.

Once Google fixes Android 3.0's drawbacks and more developers make tablet apps, Android will be in a dogfight with iOS. But who knows what Apple might introduce in iOS 5? Meanwhile, businesspeople who use BlackBerry phones should value the handsets' interaction with the PlayBook, plus the security of the platform; such capabilities will outweigh many of the PlayBook's weaknesses.

HARDWARE OPTIONS

Flyer

HTC's upcoming tablets—the Flyer for Best Buy and the EVO View 4G for Sprint—were unveiled with Android 2.3, but Sprint has hinted that its slate will carry Android 3.0. Support for HTC's Scribe pen lets you capture notations digitally.

Iconia Tab

In early demos, Acer's Iconia Tab A500 Android 3.0 tablet seemed promising. The Wi-Fi-only tablet has an aluminum build and carries familiar-sounding specs, including Adobe Flash 10.2 support and a 1280-by-800-pixel display with a 16:10 aspect ratio.

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superlight laptops

These high-flying portables—none more than 4 pounds—leave their bulkier brethren behind.

BY JASON CROSS AND JON L. JACOBI

SONY VAIO Z-SERIES The VPC-Z137GX/S strikes a balance of portability, ergonomics, and performance; but the price is steep.

PHOTOGRAPHS BY ROBERT CARDIN

you have to

take only a couple of business trips or vacations with a 6-pound laptop in tow before you start thinking about switching to a PC with a little less meat on its bones. Although 14- and 15-inch all-purpose laptops are abundant and often inexpensive, just throw one into your backpack or briefcase and lug it around for a few days—your shoulders will soon beg for mercy. Fortunately, you can find plenty of laptops on the market now that are slimmer, lighter, and more powerful than almost anything that you could have bought just a few years ago.

What qualifies as a "lightweight laptop"? We drew the line at 4 pounds. There's a marked difference in design, features, and feel between laptops under that weight and their heavier friends. It may not seem like much, but a pound or two can make a big difference. Consider the heft of a pint of water: 1 pound. The difference between the lightweight laptops featured here and your run-of-the-mill 5.5-pounder is the equivalent of two (or two-and-a-half) extra pints of water in your laptop bag. It gets tiresome pretty fast.

Of course, laptops that are more Olive Oyl than Bluto come with a few compromises. Giving up weight can mean giving up performance, battery life, and certain other capabilities. Most laptops that weigh less than 4 pounds lack optical drives, so forget about burning DVDs or watching Blu-ray movies without an external USB drive. They also tend to be thinner, leaving less room for larger, longer-running batteries, and for heat sinks and fans to dissipate the heat from high-power processors, which in turn means limited processing power. Nor is there room for a high-power discrete graphics card, so gaming enthusiasts are out of luck. Finally, expect to pay a little more for a thin-and-light laptop, relative to the performance received. Sure, you can find cheap laptops under 4 pounds, but at any given price, you'll get more performance, storage space, and features if you're willing to deal with some extra weight.

Truly light laptops rarely have a screen larger than 13 inches, but they otherwise come in a variety of styles, sizes, and prices.

If superslim is your preference, look no further than the Sam-

LAB TESTED

ULTRALIGHT LAPTOPS
Five Portables You Can Carry Anywhere

MODEL	Rating	Performance	Features and specifications	Bottom line
Lenovo IdeaPad U260 **$1199** find.pcworld.com/71593	★★★½☆ VERY GOOD	• WorldBench 6 score: 75 • WorldBench 6 rating: Good • Overall design: Superior • Tested battery life: 4:13	• 1.33GHz Intel Core i5 470UM • 12.5-inch widescreen • 3.0 pounds • 320GB hard drive	This ultraportable model achieves only median performance; but its style, keyboard, and touchpad will wow you.
Lenovo ThinkPad X120e **$650** find.pcworld.com/71758	★★★★☆ VERY GOOD	• WorldBench 6 score: 57 • WorldBench 6 rating: Fair • Overall design: Superior • Tested battery life: 5:26	• 1.60GHz AMD Fusion E-350 • 11.6-inch widescreen • 3.4 pounds • 320GB hard drive	This ThinkPad is not an ultraportable, even though Lenovo refers to it as such. Rather, it's one of the best netbooks ever.
Lenovo ThinkPad X220 **$1299** find.pcworld.com/71759	★★★★½ SUPERIOR	• WorldBench 6 score: 122 • WorldBench 6 rating: Very Good • Overall design: Superior • Tested battery life: 7:15	• 2.5GHz Intel Core i5 2520M • 12.5-inch widescreen • 3.3 pounds • 320GB hard drive	Fast and light, with great input ergonomics and battery life, this unit is best of breed; its old-school look lacks appeal.
Samsung Series 9 **$1649** find.pcworld.com/71760	★★★★½ SUPERIOR	• WorldBench 6 score: 103 • WorldBench 6 rating: Good • Overall design: Superior • Tested battery life: 5:30	• 1.4GHz Intel Core i5 2537M • 13.3-inch widescreen • 2.88 pounds • 128GB solid-state drive	If you can afford it, Samsung's high-style, superthin laptop will make you the envy of your friends with bulky PCs.
Sony VAIO Z-Series **$2300** find.pcworld.com/71589	★★★★½ SUPERIOR	• WorldBench 6 score: 118 • WorldBench 6 rating: Very Good • Overall design: Superior • Tested battery life: 6:20	• 2.5GHz Intel Core i5 460M • 13.1-inch widescreen • 3.1 pounds • 256GB solid-state drive	They don't come any better—or more expensive—than this slightly larger-than-average ultraportable laptop.

CHART NOTES: Ratings are as of 4/11/11. Tested battery life is expressed in hours:minutes.

Lenovo
IdeaPad U260

With its copper (or "mocha brown") cover, this IdeaPad could be a contender for design awards.

sung Series 9, the latest PC to seriously challenge Apple's MacBook Air for slim-computing dominance. Business users especially interested in usability will want to focus on the ThinkPad X220, which maintains Lenovo's excellent, long-running standards for keyboard quality and management features.

And for the more style-minded among us, Lenovo has a sleeker unit in the IdeaPad U260. Meanwhile, Sony's Z-Series VPCZ137GX/S is a pricey alternative aimed at business executives who want it all, including a decent discrete graphics chip.

If you're on a tighter budget, the tiny size of Lenovo's ThinkPad X120e netbook should fit the bill. It's powered by AMD's Fusion E-series processor, giving it performance that's a step above the typical Intel Atom-powered netbook.

Let's look at these ultralight laptops in alphabetical order.

LENOVO'S IDEAPAD U260:
Unexpected Style

Despite generations of sober-looking, utilitarian forebears and a name that suggests a bad World War II submarine movie, Lenovo's $1199 IdeaPad U260 goes where the company's laptops never went before—into the queue for style and design awards.

And the U260 gives Apple and Sony something to think about. When closed and viewed from the back, with its dark copper shell (Lenovo calls the color "mocha brown") covering the black main body, this 0.75-inch-thick ultraportable laptop resembles an extravagantly bound book- or pad-holder.

When opened, the IdeaPad U260 presents you with an all-black, minimally populated keyboard deck consisting of a smallish power button, an ambient light sensor that adjusts display brightness automatically, a tiny OneKey system recovery button (accessible only if you use a pointy object), the best Chiclet-style keyboard I've ever typed on, and an equally elegant touchpad with smooth-operating buttons. In a break with tradition, Lenovo does not include an eraserhead or nubbin pointing device.

Style aside, the U260 earned mixed results in PCWorld Labs tests. Our review unit had an Intel Core i5 470UM CPU, 4GB of DDR3 system memory, and a 12.5-inch color display with 1388 by 766 resolution. But the 320GB hard drive spins at just 5400 rpm, which undoubtedly helped hold the U260's WorldBench 6 score to a pedestrian 75. (An update to one of Intel's Sandy Bridge CPUs would certainly boost the laptop's performance.)

Gaming frame rates on our test machine were in the teens (or worse), owing to Intel's integrated graphics. On the other »

hand, every video we tried played smoothly, even at 1080p. Audio quality is so-so, and rather quiet through the speaker.

Your connection options consist of two USB 2.0 ports, VGA and HDMI video outputs, an AC jack, a gigabit ethernet port, and a single combination microphone/headphone jack. The laptop has no internal optical drive, and the wireless is 802.11n.

Lenovo includes 64-bit Windows 7 Home Premium as the operating system, but no productivity software. You also get a VeriFace facial recognition utility that's quite cool, as well as a shock sensor and the CyberLink Webcam utility.

The U260 is an average performer overall, but its top-of-the-line ergonomics more than compensates for that. My main disappointment is the lack of an option for a faster hard disk or a solid-state drive, to improve performance. *—Jon L. Jacobi*

LENOVO'S THINKPAD X120e:
A Superfast Netbook for Business

Lenovo calls its ThinkPad X120e an ultraportable—and its AMD Fusion CPU certainly endows the laptop with much more muscle than past netbooks have exhibited. But it's nowhere near as fast as the average Intel Core CPU–based ultraportable. Given the choice to characterize the X120e as an underpowered ultraportable or as a wonderful netbook, I'm going with the latter.

Lenovo has done a magnificent job of giving the keyboard a full-size feel, but the 1366-by-768-resolution, 11.6-inch display suffers compared with some other models' larger screens. Lenovo, however, is king of the keyboard, and the X120e has the best netbook keyboard ever—nothing else comes close. The feel is magnificent. The touchpad is comfortable and perfectly responsive, and the company includes a TrackPoint eraserhead cursor control.

The ThinkPad X120e comes in various configurations, starting at $399 for an E-250 Fusion CPU, 2GB of memory, and a 250GB, 5400-rpm hard drive. Our X120e test system came equipped with the slightly faster E-350 CPU, 4GB of memory, and a 300GB, 7200-rpm hard drive. Those burlier components carried the X120e to a WorldBench 6 score of 57—far higher than traditional netbooks receive, but lower than a typical, pricier ultraportable. (Our review unit would cost $650—pretty steep for a netbook.)

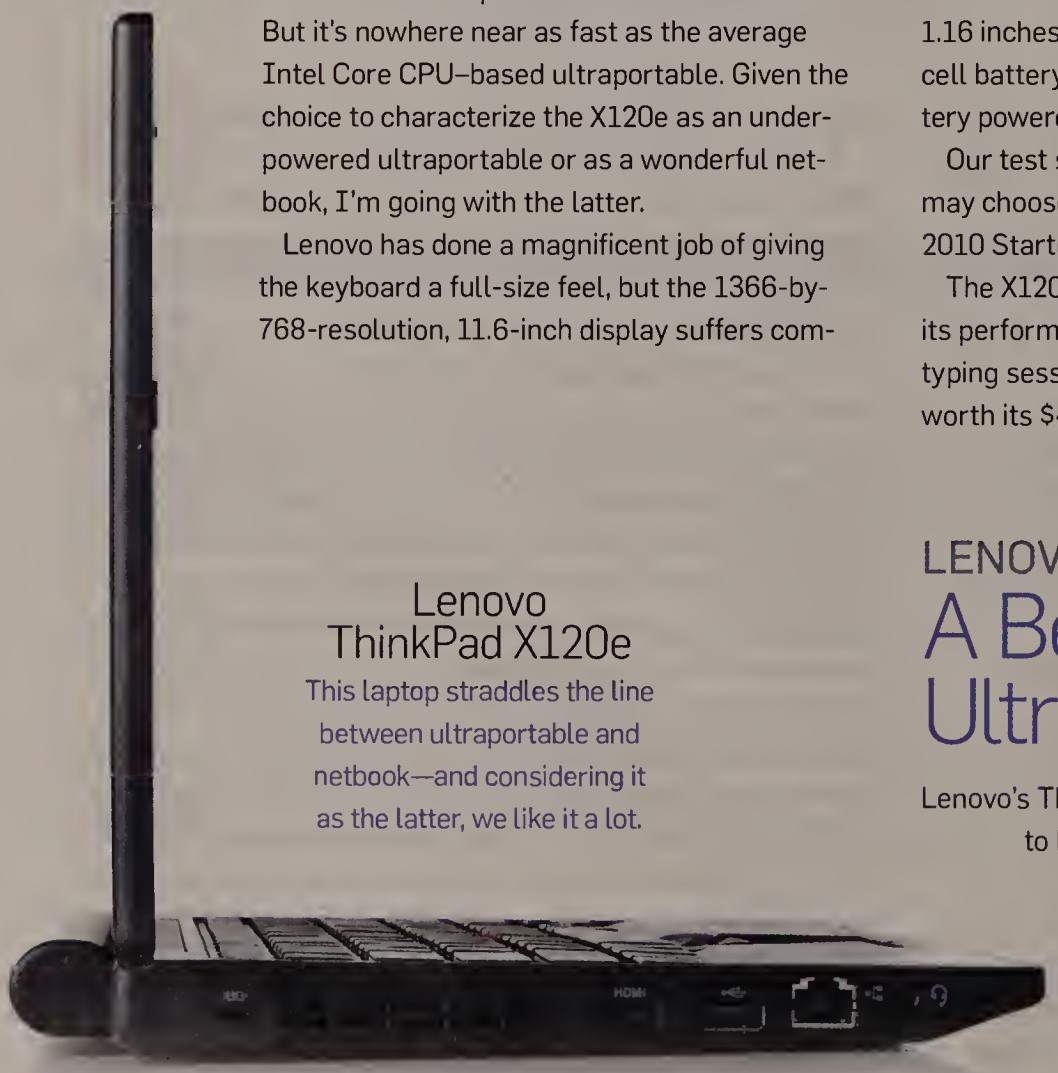
Video performance ranges from excellent to mediocre. With codecs that its Radeon HD 6310 graphics hardware supports, it plays 1080p video smoothly. But with codecs handled by the CPU alone, it's limited to 720p, not always smoothly. Gaming frame rates approached playable, falling just shy of 30 frames per second in Unreal Tournament at 800 by 600 at medium resolution.

The X120e carries the netbook-standard three USB 2.0 ports, and both VGA and HDMI video outputs. Its ethernet capability supports gigabit speeds, you get Bluetooth on board, and you can choose between b/g/n and a/b/g/n wireless.

A tad larger than the average netbook at 11.1 inches wide by 7.45 inches deep (add about 0.75 inch for a six-cell battery) and 1.16 inches thick, the X120e weighs 2.93 pounds (with a three-cell battery) or 3.31 pounds (with a six-cell pack). A six-cell battery powered our test unit for nearly 5.5 hours—impressively long.

Our test system came with Windows 7 Professional, but you may choose Home Premium 32-bit or 64-bit, instead. Office 2010 Starter is on board; Norton Internet Security is an option.

The X120e is not an ultraportable: Its screen is too small, and its performance too slow. But it's the best netbook going. One typing session will convince you that this model is more than worth its $450 starting price. *—Jon L. Jacobi*



Lenovo ThinkPad X120e

This laptop straddles the line between ultraportable and netbook—and considering it as the latter, we like it a lot.

LENOVO THINKPAD X220:
A Best-of-Breed Ultraportable

Lenovo's ThinkPad X220, which replaces the X201 model, is sure to be a hit with ThinkPad fans—and most everyone else. It is fast and light, has a great 12.5-inch display, and continues the company's enviable tradition of superb input ergonomics, offering an innovative buttonless touchpad and a long-stroke keyboard. It also provides excellent battery

living light

Using a slim, small, and light laptop comes with a few compromises. These three tips can make it easier to live with an ultraportable's limitations.

1

Let another PC do the heavy lifting: If you want to play the latest games, edit high-definition video, or do the kind of photo editing or large spreadsheet work that demands more-powerful processing and a larger screen, you may want to delegate those tasks to a second computer. Even an inexpensive desktop PC will be far more capable than a lightweight laptop at CPU-intensive applications.

2

Keep your head in the cloud: Storage space is limited on smaller laptops, and you may not have an optical drive. Online storage services like Dropbox, Skydrive, or Amazon Cloud Drive make it easy to save and access documents. Save photos to Flickr or Picasa. Use remote desktop software such as Windows Live Mesh or LogMeIn to access your home or office computer when you are out on the road.

3

A great bag makes all the difference: You'll negate the benefits of having a laptop with a smaller footprint and lighter weight if you lug it around in a huge bag. Take your time in shopping for a backpack, shoulder bag, or handbag. Look for one that's light and comfortable, and fits your laptop, its charger, and your other gadgets and accessories. You want everything to be easy to store and retrieve—in a compact bag.

life—up to a whopping 23 hours with a bottom-mounted battery slice. The downside? Not much—mainly a boxy, businesslike look.

Exact prices for all of the ThinkPad X220's configurations are unavailable at this time: The starting price should be $979, going up with better CPUs, solid-state drives instead of standard hard-disk drives, and more RAM. CPUs range from an Intel Core i3 to a Core i7, the unit accepts up to 8GB of memory, and storage options start with a 160GB HDD and end with a 160GB SSD.

Our $1299 test model—with its 2.5GHz Core i5-2520M processor, 4GB of DDR3 system memory, and 7200-rpm, 320GB hard drive—turned in an outstanding WorldBench 6 score of 122. And its integrated Intel HD Graphics 3000 GPU managed playable frame rates in some lighter gaming tests; 1080p movies, even the high-bit-rate variety, play smoothly.

Some of the keys, such as the extra-large <Esc> and <Del> keys above the main alphabetical keys, are a tad odd. These keys don't hinder your typing, however; they help it. The long-throw feel of the keyboard is excellent. The touchpad has a buttonless design—you press down on the left or right front edge to click. Two normal buttons sit above the touchpad, and you also get Lenovo's TrackPoint eraserhead pointing device.

The X220's battery life is outstanding. Our test machine, with its six-cell battery, ran for a cool 7 hours, 15 minutes. You can opt for a three-cell or nine-cell main battery, for less weight or a longer run time, and add a bottom-mounted $179 battery slice.

The ports and connectivity on the X220 are top-notch. The system has three USB ports, one of which is powered (for charging cell phones and the like) even when the laptop isn't turned on. With the i7 CPU, one port can optionally be USB 3.0. You'll also find an ExpressCard slot, an SD Card slot, a Wi-Fi switch, a VGA port, and a gigabit ethernet port. A dock is available with a multiformat burner, Bluetooth is on board, and the Wi-Fi is dual-band 802.11n (2.4GHz and 5GHz). Our test laptop arrived with IBM's biometric finger-swipe sensor to facilitate security.

But be wary of the many "value added" applications and unnecessary background processes. The Windows 7 Professional operating system has just about every software feature you need for a laptop, yet on our machine a quick glance at the Windows Task Manager revealed nearly 90 processes running and almost 30 percent memory usage—without a single user application running. Trial versions of Norton Internet Security and Microsoft Office 2010 Starter come bundled.

ThinkPad users won't find anything mind-blowingly different here, but the improvements are noticeable, and all of them enhance usability. The Lenovo ThinkPad X220 is in many ways the best thing going in an ultraportable. *—Jon L. Jocobi*

SAMSUNG SERIES 9: A Real MacBook Air Competitor

At less than 3 pounds and 0.7 inch thick, Samsung's Series 9 laptop challenges Apple's MacBook Air for the ultraslim limelight. At a starting price of $1649 (compared with Apple's $1299), the Series 9 is costlier than the 13-inch MacBook Air, but it offers generally superior hardware and is eminently usable.

The biggest advantage that Samsung's slim wonder has over the Air is in the processor. Apple is still using a two-generations-old Core 2 Duo, while the Series 9 comes equipped with a »

what about mac?

APPLE MAKES ONE laptop that weighs less than 4 pounds: the MacBook Air. Offered in 11- and 13-inch variants, it's extremely thin and light, much like the Samsung Series 9. An 11-inch Air starts at $999, but you'll get only a 1.4GHz Core 2 Duo processor, a 64GB SSD drive, and 2GB of RAM. A 13-incher starts at $1299 with a 1.86GHz Core 2 Duo CPU, a 128GB SSD, and 2GB of RAM.

MacBook Airs are beautiful systems with comfortable keyboards and great trackpads, and you can run Windows on them by using virtualization software. Of course, you'll need to fork over more than $100 for a Windows license on top of the MacBook Air's price.

If you prefer to work in Windows, you're probably better off with one of the lightweight PCs featured here. You can read our reviews and other coverage of Apple's sleek laptop at find.pcworld.com/71705.

new "Sandy Bridge" Core i5 2537M. So even though the default clock speed of the Air is 1.86GHz and the ultra-low-voltage CPU in the Series 9 is only 1.4GHz, the Series 9 is actually a bit faster: It earned a WorldBench 6 score of 103, while the 13-inch MacBook Air scored 90. Also, Samsung includes 4GB of RAM.

The Series 9's battery life is quite decent for a laptop this thin: 5.5 hours in our battery run-down tests, which is on a par with many thicker, heavier ultraportables, and about half an hour longer than the 13-inch MacBook Air. The Series 9 comes standard with a 128GB solid-state drive, as the Air does, and this enables the system to feel responsive and quick, to boot up fast, and to resume Windows in less than 3 seconds when you open the lid.

The Series 9 falls a bit short in 3D gaming, relying on Intel's HD Graphics 3000 to push pixels; the GPU isn't powerful enough to run the latest games without severely compromising visual quality. But the integrated graphics does a great job with video decoding, so even high-def material plays smoothly.

After a bit of tweaking, our Series 9 was a joy to use. Samsung says that its handsome brushed-metal exterior is made from Duralumin, an aluminum alloy first made for rigid airships and planes. The system feels stiff and sturdy, with very little flex. The 13.3-inch LED backlit screen is one of the laptop's best features. The 1366 by 768 resolution is appropriate for its size, but the vibrant colors, excellent viewing angles, bright backlight, and matte antiglare finish really make it stand out.

The full-size keyboard is easy to type on—the keys have a distinct "clicky" feel and are all sized and spaced to enable touch-typists to achieve their full speed easily and without errors. The touchpad is big, but it's just too sensitive—and all its multifinger gesture controls can't make up for that excessive touchiness.

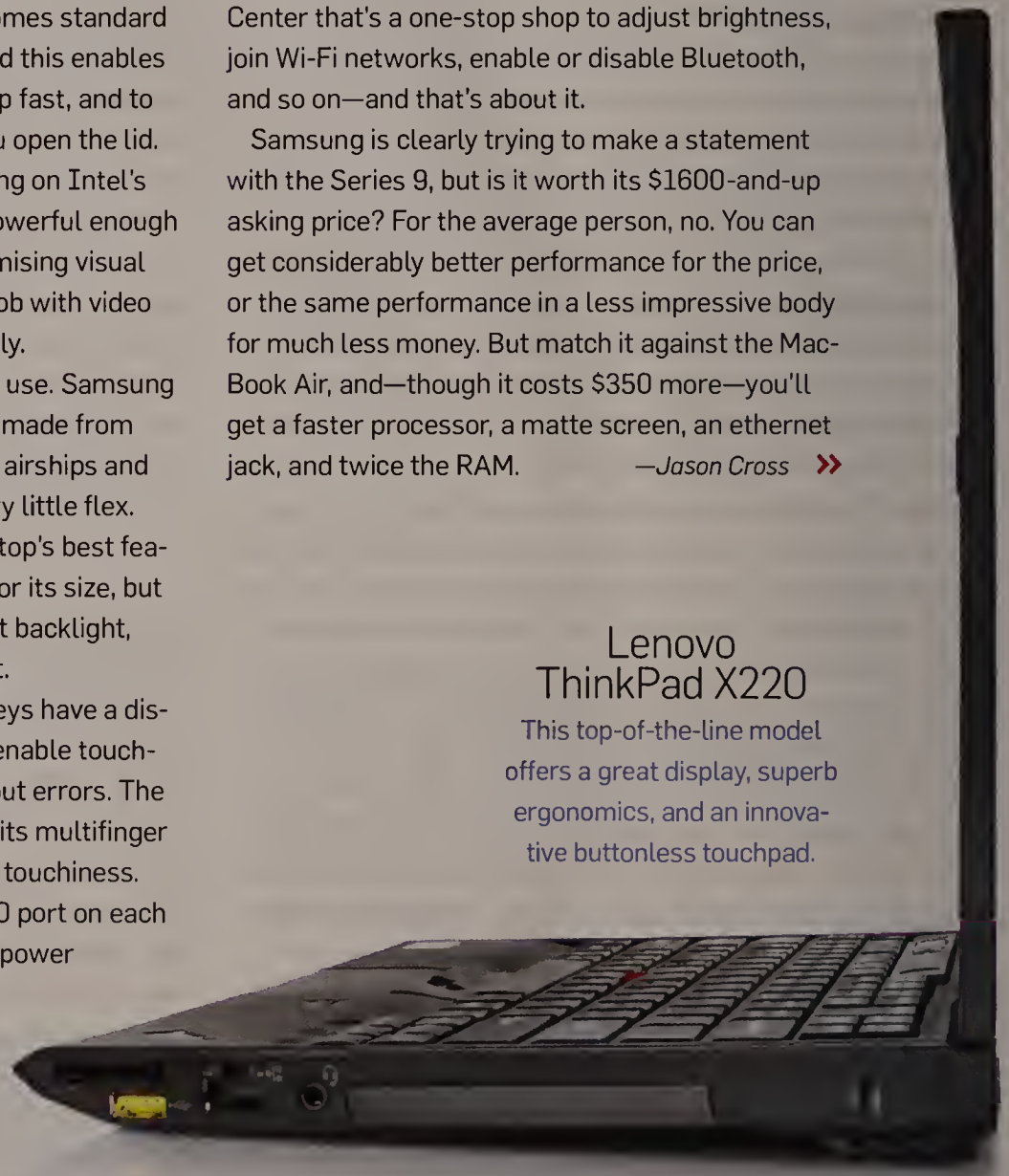
As for connectivity, Samsung provides a USB 2.0 port on each side, one of which is a "sleep-and-charge" port to power devices while the laptop is asleep. You also get a Mini HDMI output port, a combination headphone/mic jack, and a microSD card slot (a full SD card slot looks as though it could have fit, and would have been much more useful). In lieu of the too-big RJ45 jack necessary for an ethernet plug, Samsung has a special port on the left side for plugging in an included, short port-to-ethernet dongle.

Preinstalled software is relatively minimal, thankfully. You get trial versions of Norton Internet Security and Online Backup, a few casual games from WildTangent, plus Skype and CyberLink YouCam. Samsung includes its own emergency system restore software as well as a simple Control Center that's a one-stop shop to adjust brightness, join Wi-Fi networks, enable or disable Bluetooth, and so on—and that's about it.

Samsung is clearly trying to make a statement with the Series 9, but is it worth its $1600-and-up asking price? For the average person, no. You can get considerably better performance for the price, or the same performance in a less impressive body for much less money. But match it against the MacBook Air, and—though it costs $350 more—you'll get a faster processor, a matte screen, an ethernet jack, and twice the RAM. *—Jason Cross* »

Lenovo ThinkPad X220

This top-of-the-line model offers a great display, superb ergonomics, and an innovative buttonless touchpad.



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SONY VAIO Z-SERIES VPC-Z137GX/S:
Light and Mighty

Sony's VPC-Z137GX/S balances portability, ergonomics, and performance in a way that's hard to beat. It's not quite as light or as small as the average ultraportable, but it offers a 13.1-inch, 1600-by-900-pixel display, great ergonomics, and a built-in DVD burner. It's still smaller and lighter than a typical all-purpose 14- or 15-inch laptop. (It weighs in at just over 3 pounds and measures 11.4 by 1.3 by 8.3 inches.) It looks great and performs superbly; the laptop hasn't sacrificed functionality for portability.

The downside to the VAIO Z-Series is its price: a whopping $2300. That's owing in part to its 256GB solid-state drive, which gives the installed 64-bit Windows 7 operating system a snappy feel that a standard rotating hard disk can't match. Sony also provides 4GB of 1066MHz DDR3 system memory and a discrete Nvidia GeForce GT 330M GPU with 1GB of video memory.

On our WorldBench 6 test suite, the unit earned an excellent mark of 118, as well as fantastic frame rates in our reference games. High-def (1080p) video played smoothly on the gorgeous display, and the audio sounded surprisingly clear and spacious.

The unit's great performance doesn't hurt its battery life—the laptop ran for 6 hours, 20 minutes in our battery rundown test.

Even with the DVD burner, Sony offers lots of ports: three USB 2.0 (sorry, no USB 3.0), both VGA and HDMI, and gigabit ethernet. You also get Bluetooth and N-wireless, software for sharing a broadband connection with up to five other users, Memory Stick MagicGate and SD memory card slots, and microphone and headphone jacks; but no eSATA or four-pin FireWire jacks.

Video from the Webcam tops out at 640 by 480 resolution.

The laptop's backlit, Chiclet-style keyboard resembles the ones on the MacBook Air and the Toshiba M645, but unlike on those units, the backlight around the keys isn't distracting. The keyboard has a nice, firm feel, and the touchpad is well-tuned.

Sony loads its VAIO laptops with software. Many of the programs are branded utilities that duplicate Windows 7 functions, but some—like the Wi-Fi hotspot utility and ArcSoft's WebCam Companion 3—extend the laptop's capabilities. You also get trial versions of Microsoft Office 2010 and Norton Internet Security.

Of all the laptops reviewed in our Test Center in the past year, this model would have been my choice to keep. *—Jon L. Jacobi*

Samsung Series 9

Similar to the MacBook Air in its dimensions, this ultraportable comes with some better, more-recent hardware inside; however, it also costs more.

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Here's How

Upgrade Your Graphics Card

Give your desktop PC more oomph by swapping in a new graphics board.

BY LOYD CASE

CHOOSING THE BEST graphics card for upgrading your aging board is difficult. Ultimately, you want a balanced setup: Too much power, and the graphics processing unit just sits idle in a game, waiting for the CPU to finish whatever it's doing. Too little power, and the CPU waits for the GPU to wrap up its tasks. In either case your game won't look or play as you want it to.

The good news is that both AMD and Nvidia have rolled out their second-generation DirectX 11–compliant graphics cards in the past several months. These revised GPUs offer improved performance, as well as more-robust feature sets. In some instances the new midrange cards (which fall into the $200-to-$300 price range) outperform older graphics boards that were priced at $500 or more only a few years ago.

For the example in this article, I'm upgrading a desktop system running an Intel Core 2 Quad Q9650 processor. This CPU was one of the faster models available during the previous Intel Core generation, but today it's average at best. That means a good midrange graphics card ($260 or less) is the appropriate fit for this PC; anything more expensive is overkill. This computer got an upgrade to Windows 7 at the time of that operating

Basic Install Toolkit

1. Battery-powered headlamp
2. Assorted screwdrivers
3. Retractable pincers

system's original release.

The platform is also a concern. Some of the newer graphics cards, such as AMD's Radeon HD 6900 line, can be quite long, and may not fit in certain PC cases.

The chassis for my example desktop is an older Antec Sonata Designer 500, which lacks the internal depth needed for longer cards. Consequently a midrange card becomes a matter of necessity.

The third issue to consider is the power supply. If you're already running a 900W monster, you can upgrade to just about any graphics card you desire. But if you're running a less formidable power supply—a 500W or 600W unit, for example—your graphics options will be more limited. Some high-end graphics cards consume significant amounts of current at startup as well as under load, which can overstress a modest power supply.

However, even within such constraints, your graphics-card choices are numerous. I tend to opt for newer midrange cards, which can offer impressive performance particularly on single monitors running at the now common 1920-by-1080-pixel resolution. At prices closer to $200, I would probably go with a Radeon HD 6870. At $250 to $270, I'd likely choose an Nvidia GeForce GTX 560 Ti. Both boards get the job done at 1080p. In the end, it depends on your budget.

In my example PC, I'm upgrading from a GTX 260 card to an Asus-made GTX 560 Ti. By today's standards the GTX 260 is pretty anemic. Asus's GTX 560 Ti DirectCU II, which currently costs around $250 to $270, is much stronger and should substantially improve performance.

CAREFULLY DISCONNECT the power cables from the old card and remove the screws holding it in place.

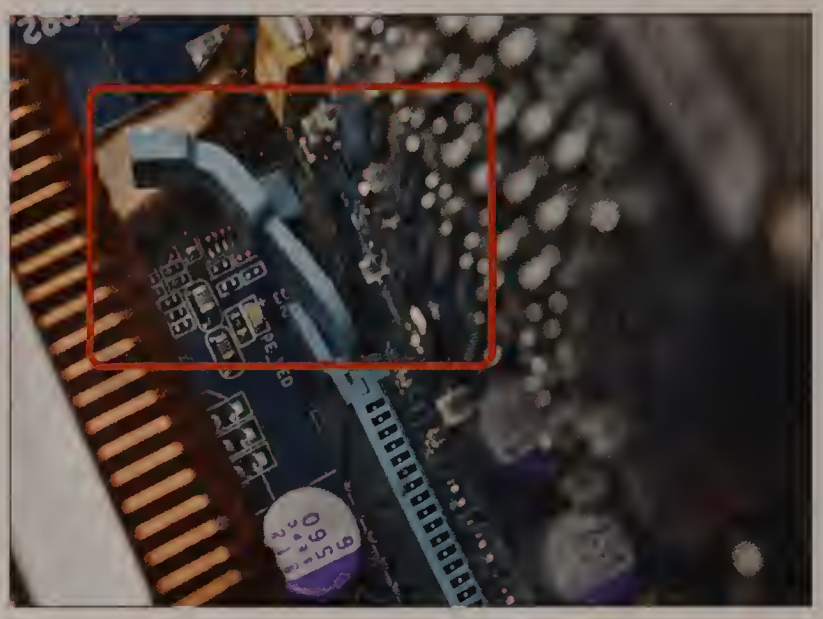
Upgrading Tips

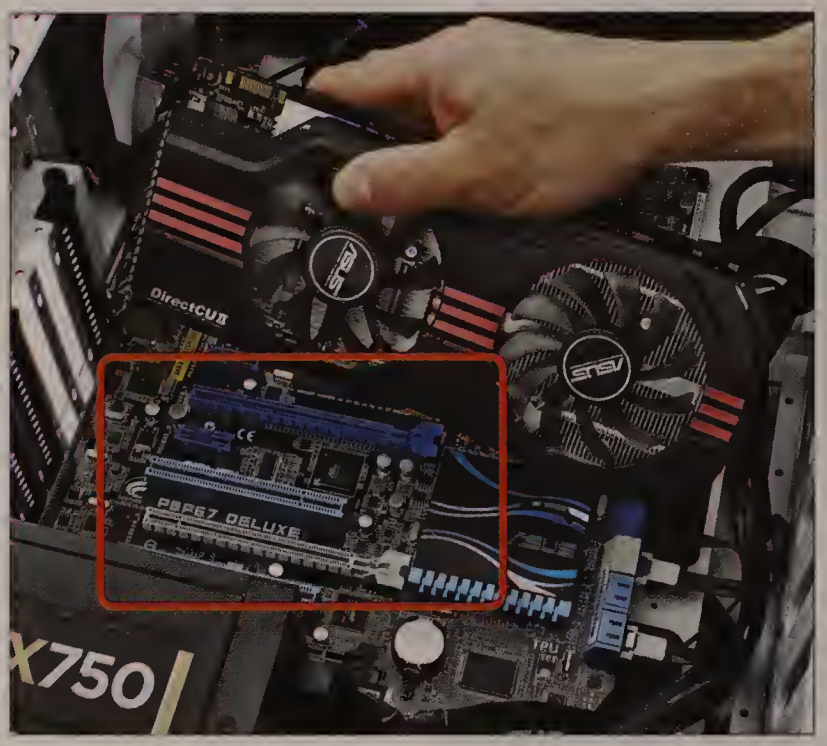
1. Before you buy a graphics card, make sure that your machine's power supply is up to the task. My example PC has a robust 750W Corsair power supply, which should be sufficient. Check the manufacturer's specs for minimum power requirements before you take the plunge.

2. Ensure that the case has enough room for the new card. Graphics boards have become longer over the years, and the space in older cases may be a little tight. In my example PC, the GTX 560 Ti just barely fits inside the older Antec Sonata Designer 500 case.

3. Download the latest driver for the new graphics card. Don't install it yet.

4. Uninstall the older graphics drivers. Even if you're »





TOP: YOU MIGHT need to hold a latch down with one hand while removing the old graphics card with the other.

MIDDLE: INSTALL THE new card in the correct slot; here, the turquoise slot is too small.

BOTTOM: ALL DONE! Organizing cables makes it easier to access the PC's insides later.

installing a GPU of the same brand as before, removing the older drivers prior to installing the new card is a good idea.

5. Power down the system.

6. Remove any power connectors from the old graphics card. Also remove the screws that attach the connector bracket to the case.

7. Ensure that no clutter—cables or wiring—surrounds the card. In addition, large CPU heat sinks can interfere with physical card removal or installation, so you may need to remove the heat sink. Be sure to detach the monitor cable from the old graphics card's outside connector, too.

8. Most motherboards have a little latch that locks the graphics card securely into its slot. You may find it necessary to hold this latch down (or aside) while removing the card with your other hand.

9. If the amount of room inside the case is too constricted, you might have to preattach the PCI Express power connectors to the new card.

10. Install the new graphics board, first making sure that no small wires are overhanging the PCI Express slot. If the card seems difficult to push down, check to see whether the connector bracket is sliding in properly.

11. Once the card is firmly in place, replace the connector-bracket screws.

12. Attach the monitor cable. If you've been using a VGA cable, and your monitor has a digital input (DVI, HDMI, or DisplayPort), now is a good opportunity to switch to digital inputs with the right cable.

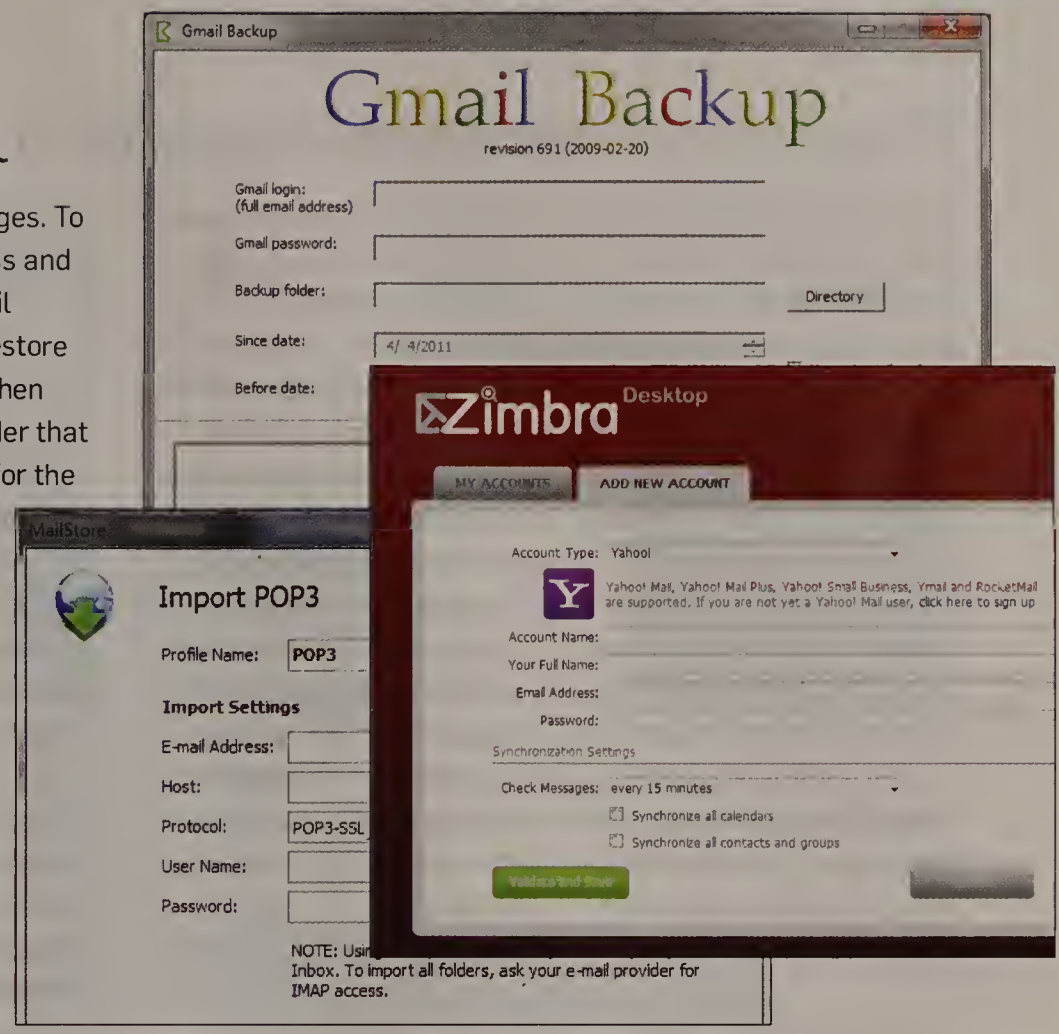
13. Double-check to confirm that the graphics card's power connectors are in place. Additionally, verify that no small wires or cables will interfere with any of the cooling fans.

14. Power up the PC. If you hear any rattling, it indicates that something is rubbing against the fans; power down and check to make sure that no fans have become blocked.

15. Once the system is powered up and running normally, install the latest drivers for the graphics card. One more reboot, and you're good to go.

Back Up Your Webmail

Don't get caught in the next Gmail crash. Here's how to protect all of your cloud-based e-mail accounts.



IN LATE FEBRUARY, 150,000 Gmail users were left in the dark when a glitch deleted all of their e-mail messages and disabled their accounts.

Luckily, Google was able to restore the deleted e-mail within a week. Even so, the outage should be a wake-up call. The time to back up your Web-based e-mail is now.

Gmail

You have a simple, free way to back up your Gmail account: Gmail Backup (find.pcworld.com/71749), which works with Windows and Linux.

In the program, enter your full Gmail address and password, and choose the backup folder to which you'll save messages; you can use the default folder or find/create your own by clicking *Directary*.

You can back up the newest messages, or all e-mail from a specific date range. To back up all e-mail in your account, select a 'Since date' from before you opened the account. Click the *Backup* button.

The process can take a long time, but you can run it in the background. You can also back up incrementally, so that Gmail Backup skips messages that have already been downloaded into a particular folder.

If something should happen to your Gmail account later on, you can restore messages. To do so, enter the address and password for the Gmail account you'd like to restore the messages to, and then choose the backup folder that houses the messages for the account you want to restore from. These don't have to be the same account.

In labels, Gmail Backup can't support characters that are not alphabetical or numerical (such as an asterisk or a slash). Its only other drawback is that it doesn't back up chat logs—Gmail doesn't put those in the 'All Mail' folder, which is the folder this utility scours.

Hotmail

Users of Hotmail and other services can try the Windows-only, free MailStore Home (find.pcworld.com/71750), which backs up and restores Web-based and desktop e-mail.

In MailStore Home, click *Archive e-mail*. Choose *POP3 Mailbox*, and enter your e-mail address, the 'Host' (**pop3.live.com** for Hotmail), and your password. Set 'Access via' to *POP 3-SSL*, and click *Next*.

The default setting is that messages are never deleted from the host once the tool has downloaded them. Leave it that way (after all, you're backing up mail, not moving it).

Not only can you see e-mail in MailStore Home, but you can also back up files to a CD, DVD, or USB drive. The tool keeps folders and labels intact, and it can run in increments (skipping messages that it has already archived).

Also, although I have fewer messages in Hotmail than I do in Gmail, MailStore Home seems to be quicker than Gmail Backup (and, yes, you can use MailStore Home to back up Gmail as well).

Yahoo Mail

Since Yahoo disables POP3 access for free users (you must have Yahoo Mail Plus, which costs $20 a year), MailStore Home won't work. Instead, install the free Zimbra Desktop (find.pcworld.com/71751). It works with Yahoo Mail, Gmail, and Hotmail.

Click *Add New Account*. Select *Yahoo* from the drop-down menu, and fill in the rest. You can also synchronize calendars, contacts, and groups. Click *Validate and Save*, and wait for Zimbra to sync (this may take a while). Then, click *Launch Desktop* and go to *Preferences*. Under your Yahoo account, click *Import/Expart*. Under 'Export', make sure *Account* is checked, and check the *Advanced Settings* box. If you don't want to sync everything, uncheck all except for *Mail*, and then click *Expart*.

You'll get a zipped .tgz file; you can open it with WinRAR (find.pcworld.com/61418). Messages save in .eml files, which a desktop e-mail program can open. You can also import the zipped file into Zimbra Desktop, and it will recover all of your messages; the utility will then sync with the server, and your Yahoo Mail account will be back on its feet.

WHETHER YOU USE Gmail, Hotmail, or Yahoo Mail, you can quickly back up messages.

—Sarah Jacobsson Purewal »

Configure Windows Update to Reduce Annoyances

DESPITE ITS IMPORTANCE, Windows Update can be an annoyance, as it regularly creates unwelcome pop-up alerts. You can configure the tool to provide less information, and you can even turn it off.

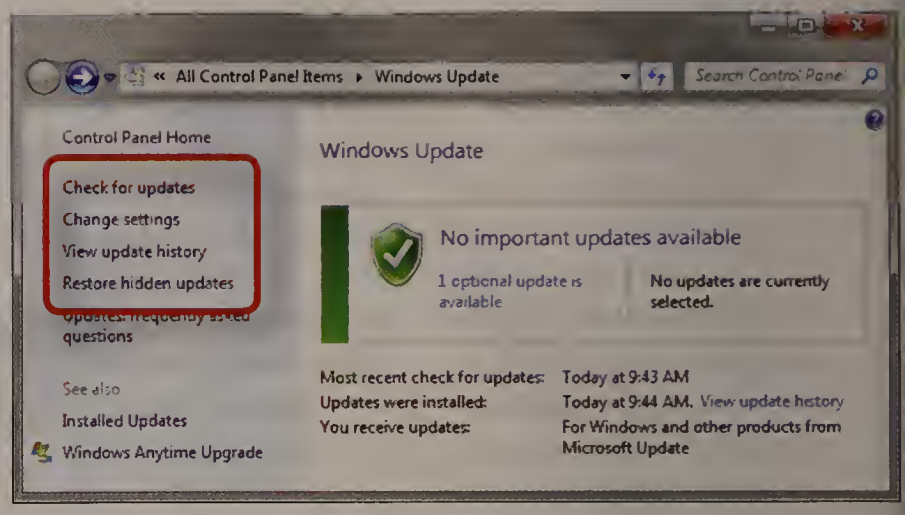
Step 1 Click *Start*, and then open the Control Panel.

Step 2 Click the *Windows Update* icon (in Classic View) or the *Check for updates* text under the Security heading (in the new Control Panel menu).

Step 3 In the Windows Update menu, click *View update history* to see all previously installed updates. Double-clicking any of them will produce details, including the date and time installed, plus information about the function that the update performs. You can also get more information by clicking on the link.

Step 4 Click *Change settings* on the left side.

Step 5 Under the 'Important updates' heading, you can change the frequency of updates. In the drop-down menu you can tell the tool to install items automatically, download updates but not install them, only alert you about new updates, or ignore updates. You can also choose the date and time at which your PC performs these tasks.



YOU CAN CHANGE Windows Update's settings to reduce its alerts.

Step 6 Below the 'Recommended updates' heading, choose whether to receive updates that are recommended but not important.

Step 7 Check the box under the 'Who can install updates' text to enable all users to install updates. Unchecking this box will permit only the administrator to do so.

Step 8 Use the 'Microsoft Update' setting to control updates to Microsoft products other than Windows.

Step 9 When you're finished, click *OK* to return to the Windows Update menu.

Step 10 Use the *Restore hidden updates* link if you decided not to install updates when they first became available and now wish to install them. From the 'Restore hidden updates' menu, pick an update and click the *Restore* button.

—Wes Simons

Wipe Your Android Phone

SMARTPHONES AREN'T SMART enough to wipe themselves of personal or business data when stolen or lost, but wiping a phone remotely keeps your information out of the wrong hands. Here are options for Android handsets.

Buy a subscription service: Verizon customers can subscribe to Mobile Recovery as part of the carrier's Total Equipment Coverage plan ($4.50 per month, per phone). Download the Mobile Recovery app (text GETMR to 6967). In addition, download and use the Backup Assistant app to back up the data that you may someday wipe.

Download a third-party app: Don't want to spend the money on a remote-access subscription service? Android users have two third-party apps to choose from: Neevo's Mobile Defense (free) and McAfee's WaveSecure ($20 per year). Both have the same wiping capability as Mobile Recovery, without the higher monthly fee. At this writing, however, Mobile Defense has been suspended for new users, with release of a new version pending.

Activate a remote wipe: If you've lost your phone, and you're using Mobile Recovery, go into your Mobile Recovery account and select *Secure Phone*. To wipe the handset, select *Erase Contacts and Lock Phone*.

With WaveSecure's service, sending a simple text message can wipe your phone. Check www.wavesecure.com for the appropriate message formatting. *—Melanie Barton Zoltán*

Remove Unwanted Software From Your PC

FEW THINGS ARE more frustrating than booting up a new PC and finding that it's littered with junk. You can zap "crapware" through Windows' Control Panel: Double-click *Programs and Features* (in the Classic View), or click *Uninstall a program* (in the new Control Panel). Select an unwanted program, and click *Uninstall/Change*.

Alternatively, the downloadable PC Decrapifier (find.pcworld.com/69411) is an easy and effective tool. On its 'Select Items' screen, you can sort through the software that it has identified as possible junk. The tool can create a restore point to fix any problems, too. Even so, pay attention to which items you remove, since the utility has trouble differentiating between trial versions and paid-for apps. If you have upgraded or manually installed any of the programs listed, deselect them so that PC Decrapifier does not remove them. *—Wes Simons*

Print Files as PDFs

IT'S EASY TO view and print a Portable Document Format file—all you need is the free Adobe Reader (or an alternative application; see page 93). Converting a file into a PDF requires a separate program, but you have several options.

In Microsoft Word 2010, open a document and click *File*•*Save As*. Enter a file name, and choose *PDF* in the 'Save as type' menu. Choose the *Standard* or *Minimum Size* quality setting. Click *Options* for ways to tweak the output; to include tracked changes and comments, for instance, select *Print Markup*. Click *OK*, and *Save*. Check *Open File After Publishing* if you wish.

Note: For Microsoft Word 2007, download Microsoft's free Save as PDF or XPS add-on (find.pcworld.com/71746). For older versions of Word, you'll find the 'Save as PDF' option in the Print dialog box.

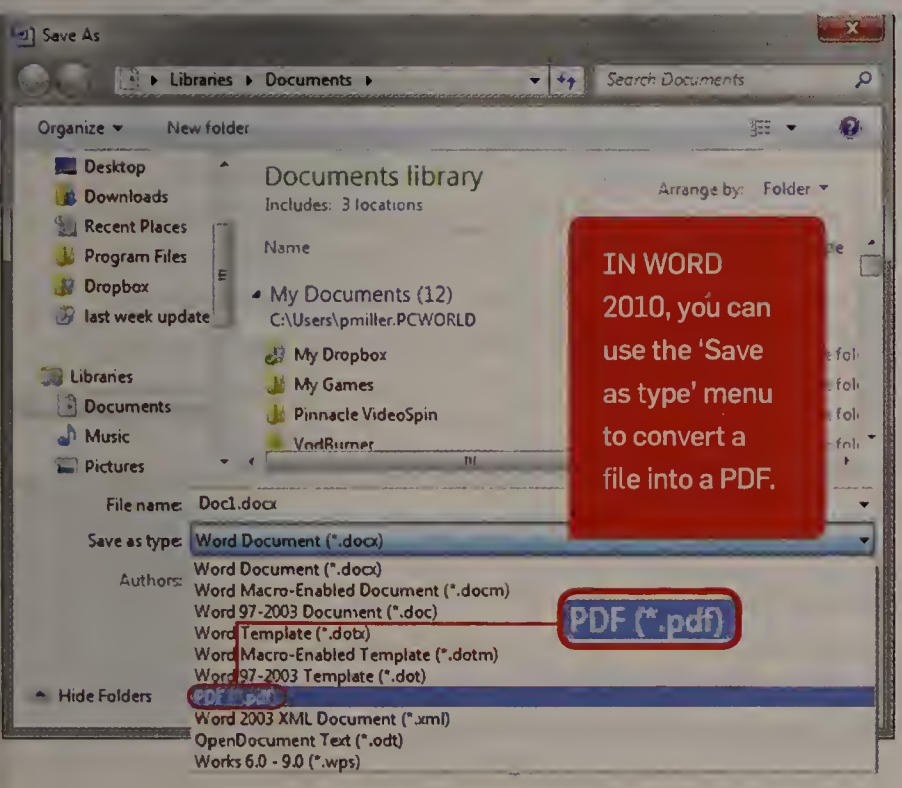
With a print-to-PDF utility, you can turn Web pages, documents, and images into PDF files. One choice is EXP Systems' PDF ReDirect (find.pcworld.com/71747). To use it, go to the *Print* menu in the program you're using. Select *PDF ReDirect* as the printer, and click *OK*. In the PDF ReDirect window, you can name the file, choose where to save it, pick a quality level, and even add a password. Click *Save* to make the PDF.

PDF Reality Check

Keep your original files after converting them into PDFs. Restoring a PDF file to its original format is rarely clean and simple, and editing a PDF can be very difficult.

Also, in some cases PDF conversion distorts or omits elements; for example, a PDF of a Web page may omit rotating graphics or ads. You may wish to take a screenshot of the Web page before performing the PDF conversion.

—Justin Phelps



ANSWER LINE

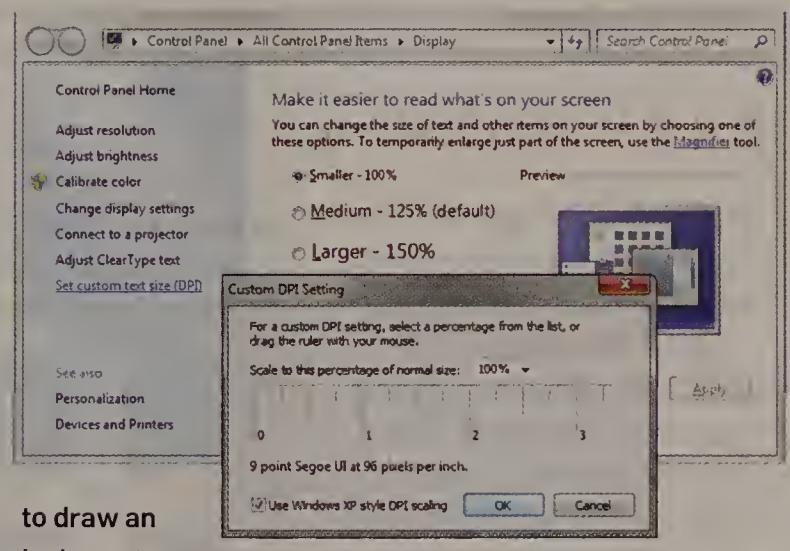
How do I fix the small text on my laptop?

—Artman, PCWorld forums

LINCOLN SPECTOR

ONE APPROACH IS to lower the screen resolution in Windows. But LCD monitors have a fixed, physical resolution, often called the *native resolution*. They can display lower resolutions only by upconverting the image—that is, adding pixels. This inevitably distorts and blurs the image.

A better way to solve the problem is to change Windows' dots-per-inch setting. The more pixels that Windows uses



to draw an inch—or to draw 10-point type—the larger the text and objects will appear on the screen.

In Windows 7, click *Start* and type display. Click the *Display* item directly below the 'Control Panel' subheading, and select an option. In Vista, click *Start*, type personalization, and choose *Personalization*. Click *Adjust font size (DPI)* on the left. Select *120 DPI* for a 25 percent increase in font size, or click the *Custom DPI* button in the lower right. You'll have to reboot for the change to take effect.

While the change in Windows 7 and Vista affects everything on screen, XP adjusts only fonts. In XP, right-click an empty spot on the desktop and select *Properties*. Click the *Settings* tab, and then the *Advanced* button. On the General tab, pick *120 DPI* in the 'DPI setting' menu, or click the *Custom DPI* button. XP then looks for fonts; if it finds them, you won't have to insert your Windows disc when asked.

MAKING TEXT easier to read on a high-resolution LCD screen is a simple matter of changing the dots-per-inch setting.

Identify an Infected File—Before You Open It

YOU JUST RECEIVED an unexpected e-mail attachment. Or a Website asks you to install software you don't recognize. Or a friend whose PC is infected hands you a flash drive with a file on it. Your instincts are correct: If you are unsure about a file, do not download it or open it before doing some detective work.

Your antivirus or antimalware program can most likely check a file before you open it (or even before you transfer the file from physical media to your PC). To perform such a check, first view the file's icon in a window. Right-click the icon to bring up a contextual menu. Your security software may have put a menu entry there labeled 'Scan file' or something similar. Click the entry to initiate a scan.

If your security software does not provide a contextual-menu option, open the security software's control panel and then navigate to the scan section. Here, you will be able to select the specific targets (files) to scan; sometimes you'll find this option listed in an Advanced Options menu.

Internet Research

If a Website is trying to install something mysterious, gather as many details as you can about the software. Record its name as well as the name of the site you were on when it popped up. Search the Internet for the name of the software; its legitimacy and safety will usually become clear after you read the first few results. If not, search for the name and add a term such as "malware," "remove," or "safe." Also check the reputation of the Website that asked you to accept the software.

In general, keep software updated: The latest Web browsers can screen downloads, warn you of harmful programs, and block recently discovered malware. And most e-mail programs scan attachments for infections before you download them.

—Justin Phelps

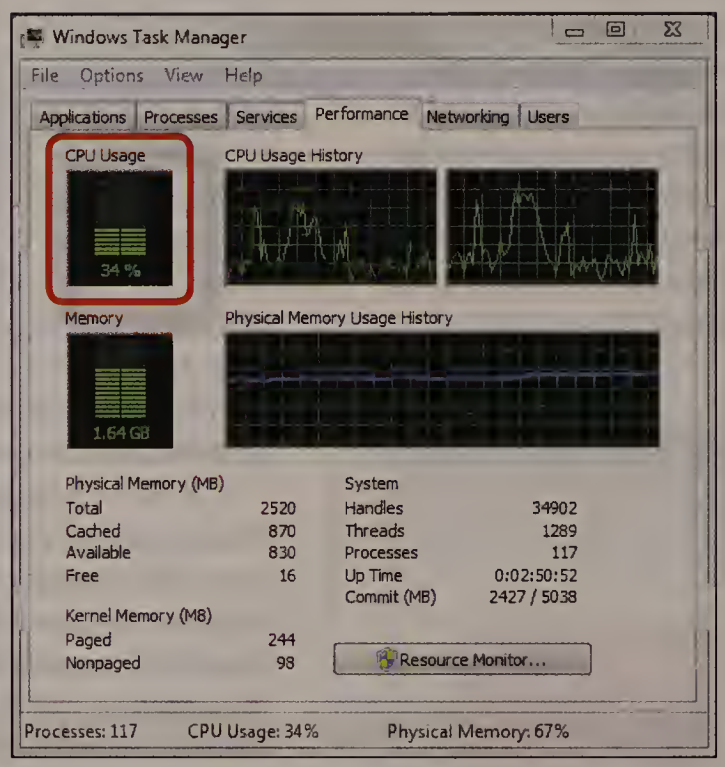
EASY HACK: EXTEND YOUR LAPTOP'S BATTERY LIFE

YOU CAN EXTEND your laptop's battery life an extra hour or two by making a few minor sacrifices.

1. Switch Windows to Power Saver mode: This mode shuts off the screen after a period of inactivity, and puts the laptop into sleep mode if you don't use it again within a certain amount of time.

Click the battery icon in the bottom right of the desktop, click *More Power Options*, and select *Power Saver*. If you don't want to use the defaults, click *Change plan settings*, and choose time durations for Screen Off and Hibernate.

2. Reduce the backlight: Operating at maximum screen brightness isn't necessary in most situations. When you first lower its setting, the screen may look too dim, but it might seem perfectly comfortable after your eyes have adjusted. To reduce the backlight, press the **<Fn>** and Lower Brightness hotkeys on your keyboard.



KEEP CPU USAGE low to avoid draining a laptop's battery.

3. Shut off Wi-Fi and Bluetooth when not needed: If you're using your laptop in a location where one or both wireless connections aren't necessary, disable them by pressing either the appropriate hotkeys on your keyboard or the laptop's dedicated wireless and Bluetooth buttons.

4. Avoid heavy processes: Playing a game, downloading files, and watching a DVD are all activities that require a laptop to run under a heavier CPU load, which drains the battery faster than normal.

You can view the current processor load by right-clicking the taskbar and choosing *Start Task Manager*. If Task Manager displays a high percentage for CPU Usage, scroll through the list under the Processes tab and terminate any running items that you don't need (right-click one and choose *End Process*). Don't terminate any process unless you are sure that it is not essential to the operation of your PC. Terminating relatively low-impact processes won't lower the CPU load significantly.

5. Throttle the CPU: Some laptops have software that lets you reduce the processor speed to conserve battery life. This feature will limit the processes your laptop can run, so use it only if you're doing light tasks such as Web browsing or word processing. To locate the throttle feature (if your laptop has it), consult your manual, or check the laptop maker's Website. *—Blair Mathis*

Best Media for Storing Backups

WONDERING WHAT MEDIA format is best for backups? For day-to-day use, I recommend an external hard drive. It's simple, quick, and inexpensive, and it can hold everything on your PC's hard drive.

Another option is a cloud service such as Carbonite or Mozy. Cloud backup has the advantage of distance—since your backup is far away, it won't succumb to the same fire, flood, or burglary that takes your PC. But it's painfully slow (the initial backup can take weeks), and in the long run it costs more.

DVD+R or DVD-R discs work best for the long-term archiving of files that aren't likely to change (photos, videos, and so forth). Use good discs; you can buy special archival discs that may have a better chance of lasting a long time (although there's no way to know for sure). Make multiple copies and keep them in different locations.

If you want to make an image backup of an entire drive or partition, either an external hard drive or DVDs will do the trick. DVDs are cheaper for this occasional chore, but a hard drive is much more convenient.

Flash is too expensive, on a per-gigabyte basis, for a large backup. But it can be handy for copying critical files, especially when you're on the road.

—Lincoln Spector

HASSLE-FREE PC

Capture Custom Screenshots in a Flash

RICK BROIDA

Grab portions of your screen, and annotate them, with Windows' Snipping Tool. Plus: Use Sumatra PDF in place of Adobe Reader.

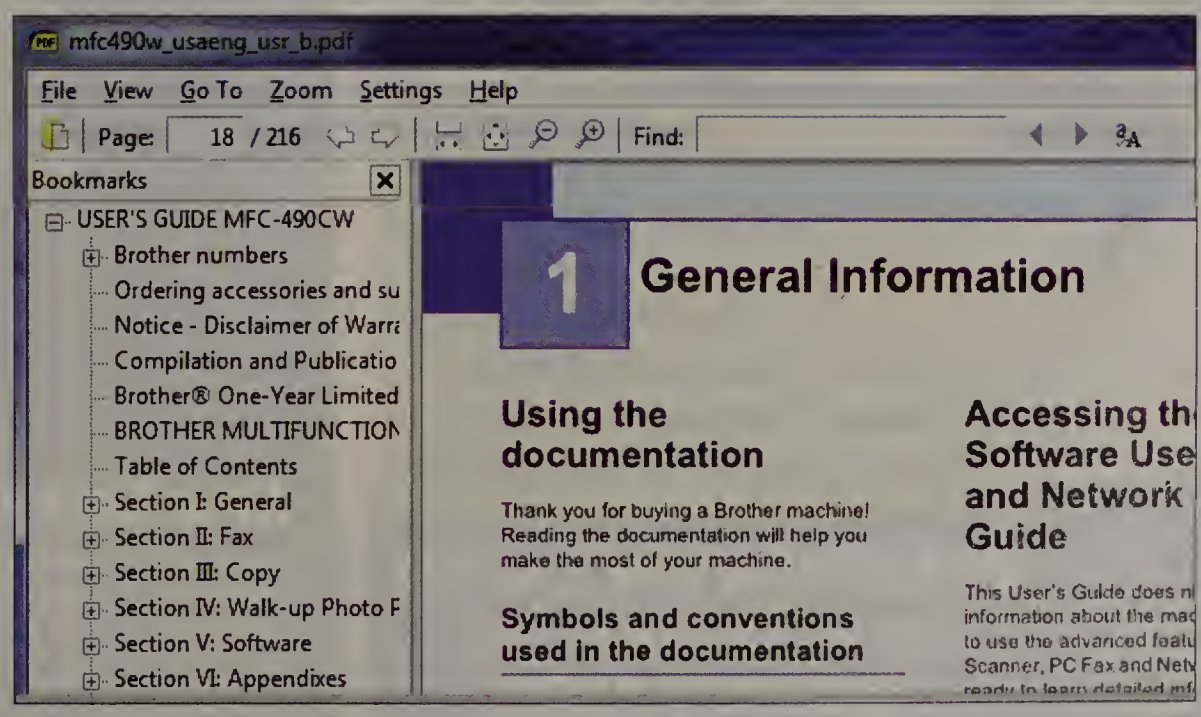
WANT TO SAVE an image of what's on your screen? One tap of the <Prt Scr> key will copy the whole screen to the Clipboard, and from there you can paste it into an image editor. (Or you can press <Alt>-<Prt Scr> to capture just the active window.) But I know a better way: the Snipping Tool. Built into Windows 7 (and some versions of Vista), it lets you capture a custom chunk of the screen, and then mark up, save, and share that image. It's fast, simple, and free.

Click the *Start* button, type snip, and then click *Snipping Tool*. The program will start up activated and ready to begin snipping. (This dims your screen somewhat, which is normal.) If you're not prepared to snip yet, click *Cancel*. Snipping involves clicking and dragging a box around an area. When you release the mouse button, the captured area appears in the Snipping Tool window. From there you can save the snip (in GIF, JPEG, PNG, or HTML format), copy it to the Clipboard, e-mail it, or add some basic notations using a pen and highlighter.

Replace Slow, Bloated Adobe Reader With Tiny, Speedy Sumatra PDF

Adobe Reader has features you don't need, plodding performance, and resource-hogging bloat. If you're looking for the smallest, fastest, and least-intrusive alternative, try the open-source Sumatra PDF (find.pcworld.com/71738). It loads in an instant, consumes only a few megabytes of drive space, and uses just 6MB of RAM when running (not including loaded documents).

You can view pages in any configuration (single page, facing pages, full screen), rotate pages, e-mail pages, and so on. If a PDF has a link, you can click it to open your browser. Interestingly, Sumatra PDF also includes an 'Open in Adobe Reader' option, in case you find a PDF that requires a Reader-specific feature (assuming that you haven't uninstalled Reader). And if you like running apps from a flash drive, grab the portable version (find.pcworld.com/71739).



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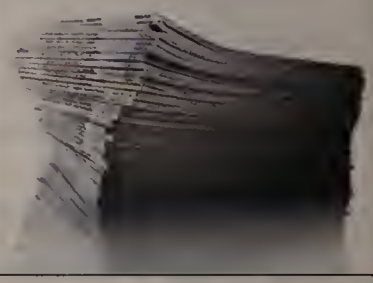

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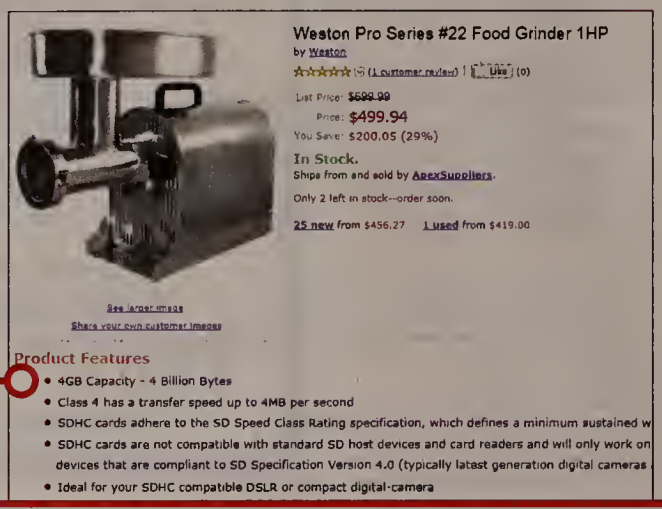
The Back Page

FROM OUR READERS

When You Need to Grind 4 Billion Bytes of Meat

HE WAS SEARCHING for an electric food grinder. But the Weston Pro Series model that freelance writer Jonathan Wylie found at Amazon offered more than he had hoped for: fast transfer speeds, compatibility with many DSLRs and compact digital cameras, and—best of all—a 4GB capacity. Now that's a food grinder with real byte.



Product Features

- 4GB Capacity - 4 Billion Bytes
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- Ideal for your SDHC compatible DSLR or compact digital-camera

Mistakes Weren't Made

NICK HASSAN and James Murphy were teaching a class in how to use Macromedia's Website design tool Dreamweaver 8 when they were stopped in their tracks by the dialog box at left. If nothing else, the two instructors can take comfort in knowing that their teaching methods are not incorrect.

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→ Global spam drops by a third. Gullible hypochondriacs complain about suddenly limited pill-buying options.

→ Apple is rumored to be working on "Smart TV." Turns out "Dumb TV" had already been invented. It's called "TV."

→ Swiss court says Google's Street View breaks privacy rules. We suspect the judge was especially critical of the new Bank Vault View.

→ Visa plans to allow person-to-person payments. We hear that, for a small fee, they'll even permit you to use cash from your own pocket.

→ Dish Network buys Blockbuster. Key asset of the bankrupt video-rental chain may be a warehouse full of unused navy blue polo shirts. ●

—Steve Fox and Steven Gray

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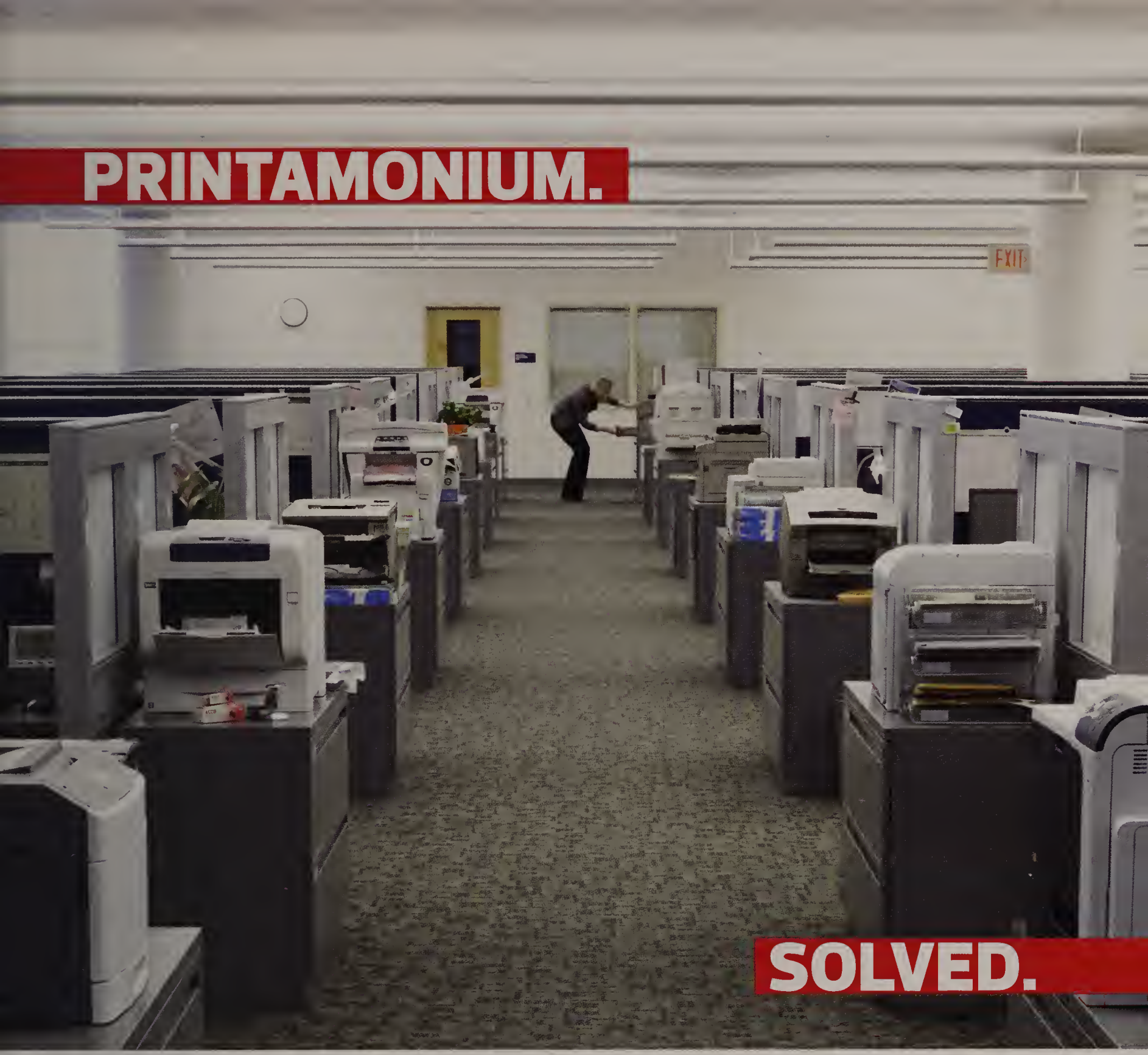

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[1]IBM xSeries 346 SAP SD 2-tier benchmark result: 2-processor Intel® Xeon®, 3.60 GHz, L1 Execution Trace cache, 1 MB L2 cache, 8 GB main memory, OS Windows Server 2003 Enterprise Edition (32-bit), DB2 UDB 8.2 (32-bit), SAP R/3 Release: 4.70 (32-bit), 470 SAP SD benchmark users, SAP Certification #: 2004071 vs. IBM System x3650 M3 SAP SD 2-tier benchmark result (SAP Enhancement Package 4 for SAP ERP 6.0), 2 processors/12 cores/24 threads, Intel® Xeon® Processor x5680, 3.33 GHz, 64 KB L1 cache and 256 KB L2 cache per core, 12 MB L3 cache per processor, 96 GB main memory, OS Windows Server 2008 Enterprise Edition, DB2 9.7, 5100 SAP SD benchmark users, SAP Certification #: 2010025. Source: www.sap.com/benchmark. Results current as of 12/13/10. [2]TBR 3Q10 x86-based Servers: Buying Behavior and Customer Satisfaction Study, November 2010. [3]Global Financing offerings are provided through IBM Credit LLC in the United States and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Monthly payments provided are for planning purposes only and may vary based on your credit and other factors. Lease offer provided is based on an FMV lease of 36 monthly payments. Other restrictions may apply. Rates and offerings are subject to change, extension or withdrawal without notice. IBM hardware products are manufactured from new parts or new and serviceable used parts. Regardless, our warranty terms apply. For a copy of applicable product warranties, visit http://www.ibm.com/servers/support/machine_warranties. IBM makes no representation or warranty regarding third-party products or services. IBM, the IBM logo, System Storage and System x are registered trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. For a current list of IBM trademarks, see www.ibm.com/legal/copytrade.shtml. Intel, the Intel logo, Xeon and Xeon Inside are trademarks of Intel Corporation in the U.S. and other countries. All prices and savings estimates are subject to change without notice, may vary according to configuration, are based upon IBM's estimated retail selling prices as of 1/25/11 and may not include storage, hard drive, operating system or other features. Reseller prices and savings to end users may vary. Products are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features, or services discussed in this document in other countries. Contact your IBM representative or IBM Business Partner for the most current pricing in your geographic area. ©2011 IBM Corporation. All rights reserved.

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